

Abbreviated Material Safety Data Sheets (MSDSs)

The abbreviated MSDSs provided for each compound listed in the following Table of Contents contain only the basic chemical, physical, and toxicological data needed to answer Pre-Lab questions and to prepare Tables of Reactants and Products for the experiments in “Experimental Organic Chemistry: A Miniscale and Microscale Approach, 3rd Ed.” Should you wish more complete information regarding the chemicals with which you are working, consult a source containing the full MSDS. Information provided regarding first-aid procedures generally describes only the initial steps that should be taken should an accident occur.

Disclaimer

Neither the authors, The University of Texas at Austin, nor Thomson Learning, Inc., assumes responsibility for the accuracy of any of the data provided in the abbreviated Material Safety Data Sheets.

Acetamide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
60-35-5	solid	colorless	distinct	174	221	80–82	1.159	10 @ 105	N/A	200%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			Avoid heat, sparks, flames.		Regular dry chemical, carbon dioxide, water, regular foam.			
Inhalation		Irritation, drowsiness, fatigue, nausea, acidosis and skin eruptions.			Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.			
Skin		Irritation.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation, corneal damage.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Drowsiness, fatigue, nausea, acidosis and skin eruptions.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Suspected carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Acetamidobenzenesulfonamide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
121-61-9	solid	off-white	N/A	N/A	N/A	219	N/A	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable, emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		May be irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Dust, vapor, or mist may be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

4-Acetamidobenzenesulfonyl Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
121-60-8	solid	tan	acetic acid-like	N/A	N/A	145–148	N/A	N/A	N/A	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, dry chemical powder, or foam.		
Inhalation		Corrosive material, chemical burns, coughing, wheezing, laryngitis, headache, and vomiting.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention immediately.		
Skin		Corrosive material, chemical burns.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.		
Eyes		Corrosive material, chemical burns.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Corrosive material, convulsions, muscle weakness, and symptoms as described in acute ingestion.			Do not eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Acetanilide										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
103-84-4	solid	white	odorless	169	304	114	1.219	1 @ 114	4.7	0.5%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, carbon dioxide, water, regular foam		
Inhalation		Irritation, eczematous skin eruptions, poisoning as in ingestion.			Ventilation, local exhaust.			Remove from exposure immediately; get immediate medical attention.		
Skin		Irritation, contact dermatitis, skin eruptions due to systemic poisoning			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Nausea, vomiting, sweating, gastric irritation, chills, brown-black urine, skin rash, hypotension, methemoglobinemia. Severe cases: hypothermia, and circulatory or respiratory failure.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Acetic Acid										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
64-19-7	liquid	colorless	vinegary	39	118	N/A	1.049	11.8 @ 20	2.07	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, carbon dioxide, water, regular foam, alcohol resistant foam			
Inhalation		Irritation, pharyngeal edema, chronic bronchitis, coughing, shortness of breath, laryngitis, pulmonary edema, and hypotension			Ventilation, local exhaust.		Remove from exposure immediately; get immediate medical attention.			
Skin		Irritation, pain, erythema, blisters, burns and superficial destruction of the skin; readily absorbed through the skin.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.			
Eyes		Irritation, lacrimation, corneal erosion, opacification, iritis, and possibly loss of sight			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Severe ulceronecrotic lesions, stricture of the esophagus, perforation of the esophagus and pylorus, diarrhea, shock, vomiting, abdominal spasms, thirst, rapid and weak pulse, slow and shallow breathing, laryngitis, bronchitis, pulmonary edema.			Do not eat or drink in the laboratory.		Contact physician immediately. Give large amounts of water or milk and allow vomiting to occur; when vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Acetic Anhydride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-24-7	liquid	colorless	vinegary	54	138–140	-73	1.082	10 @ 36	3.52	reacts
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources, contact with water or moist air may generate flammable and/or toxic gases.			No flames, no sparks, no contact with hot surfaces.		Carbon dioxide, regular dry chemical, alcohol resistant foam			
Inhalation		Severe irritation, cough, choking, wheezing, chest pain, and pulmonary edema, which may be fatal.			Ventilation, local exhaust.		Remove from exposure immediately; get immediate medical attention.			
Skin		Irritation, white, wrinkled skin, blisters, and severe burns.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.			
Eyes		Pain, lacrimation, photophobia, and blurred vision. Corneal and conjunctival edema, iritis, corneal erosion, and opacity may be delayed effects.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Severe burns of the mouth, esophagus, and stomach with pain, difficulty swallowing, nausea, vomiting, and diarrhea.			Do not eat or drink in the laboratory.		Contact physician immediately; give large amounts of water or milk, and allow vomiting to occur; when vomiting occurs keep head lower than hips.			
Carcinogenicity		Not a known carcinogen				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Acetone										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
67-64-1	liquid	colorless	minty, sweet	-17	56	-94	0.791	180 @ 20	2.0	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		SEVERE fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot sources			Alcohol resistant foam, carbon dioxide, regular dry chemical, water		
Inhalation		Irritation, dryness of the mouth and throat, restlessness, anorexia, vomiting, slow, irregular respiration, slow, weak pulse, liver and kidney damage, central nervous system depression with weakness of the legs, headache, nausea and a general feeling of malaise.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, cellular damage to the outer layers of the epithelium with edema and hyperemia, small amounts may be absorbed through intact skin.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, corneal epithelial, conjunctival, stinging sensation, and damage to eyes.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Fruity odor of the breath and mucous membrane, gastroenteric irritation, flushed cheeks, shallow respiration, latent period followed by restlessness, diarrhea, nausea and vomiting.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. If vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

<i>p</i>-Acetophenetidide (Phenacetin)										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
62-44-2	crystalline powder	white	odorless	N/A	decomposes	134–135	N/A	N/A	N/A	1 g/1310 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slightly flammable.			No open flames.			Water spray, dry chemical, alcohol foam, or carbon dioxide.		
Inhalation		Cyanosis, dizziness, respiratory depression.			Local exhaust or breathing protection.			Remove to fresh air. Get medical attention.		
Skin		Possibly a mild irritant.			Protective gloves and clothing.			Immediately flush skin with plenty of soap and water for at least 15 min. while removing contaminated clothing and shoes. Get medical attention.		
Eyes		Possibly irritating to eye tissues.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 min., lifting lower and upper eyelids occasionally. Get medical attention immediately.		
Ingestion		Moderately toxic, causes cyanosis, dizziness, respiratory depression. Cardiac arrest may occur. May result in liver and kidney damage.			Do <i>not</i> eat or drink in the laboratory.			Induce vomiting immediately as directed by medical personnel. Call a physician immediately.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Acetophenone										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
98-86-2	liquid	colorless	floral	82	203	19-20	1.030	1 @ 15	4.14	0.55% @ 20
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Regular dry chemical, carbon dioxide, water, regular foam		
Inhalation		Irritation, coughing and central nervous system depression with headache, dizziness, and narcosis.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Irritation, redness, pain, and mild burns.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Severe reaction with only transient optical irregularity of the corneal epithelium.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Sore throat, abdominal pain, nausea and central nervous system depression with headache, dizziness, and narcosis.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. If vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Adipic Acid										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
124-04-9	crystalline solid	white	odorless	196	337	150–152	1.360	1 @ 159.5	5.04	1.4 g/ 100 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Combustible.			No open flames.		Powder, water spray, foam, carbon dioxide.			
Inhalation		Cough. Labored breathing. Sore throat.			Local exhaust or breathing protection.		Fresh air, rest. Refer for medical attention.			
Skin		Redness.			Protective gloves and clothing.		Remove contaminated clothes. Rinse skin with plenty of water or shower.			
Eyes		Redness and pain.			Safety goggles.		First rinse with plenty of water for several minutes; remove contact lenses if possible; seek medical attention.			
Ingestion		N/A			Do <i>not</i> eat or drink in the laboratory.		Rinse mouth. Rest. Refer for medical attention.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Alumina										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1344-28-1	solid	white	odorless	N/A	2980	2053– 2072	3.965 @ 25	1 @ 2158	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Coughing, shortness of breath, respiratory tract irritation due to mechanical action, and exacerbation of symptoms in persons with impaired pulmonary function.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Irritant dermatitis, pruritis.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, redness, and possibly swelling of the conjunctiva.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		N/A			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Possible carcinogen			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Aluminum Chloride										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7446-70-0	solid	white	pungent	N/A	N/A	190 @ 1900	2.44 @ 25	1 @ 100	N/A	reacts
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Carbon dioxide, regular dry chemical.		
Inhalation		Forms corrosive hydrochloric acid on contact with moisture, coughing, choking, pain in the nose, mouth and throat and burns of the mucous membranes. Symptoms may include tightness in the chest, frothy sputum, cyanosis, and dizziness.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention immediately.		
Skin		Severe irritation, pain, and possibly burns.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Redness, pain, blurred vision, and corneal burns.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately, continue to wash eyes with water.		
Ingestion		Burning pain in the mouth and throat, severe burns of the mucous membranes, discoloration of the tissues, swallowing and speech may be difficult, vomiting, diarrhea, hemolysis, kidney damage, and liver damage with jaundice.			Do <i>not</i> eat or drink in the laboratory.			Give water or milk; if vomiting occurs, keep head lower than hips; get medical attention immediately.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Aminobenzoic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
150-13-0	solid	white	N/A	N/A	N/A	188–189	1.374	N/A	N/A	5.39 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.			No open flames or sparks.			Water spray, Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled. Irritating to respiratory system. Do <i>not</i> breathe in dust.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		Causes skin irritation. May cause sensitization by skin contact.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Causes eye irritation			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Ammonium Hydroxide										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1336-21-6	liquid	colorless	pungent, sharp	N/A	36	N/A	0.90	115 @ 20	1.2	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Irritation, swelling of the lips, restlessness, runny nose, headache, salivation, nausea, vomiting, difficulty in speaking, decreased respiratory function, and inflammation, or edema of the larynx.			Ventilation, local exhaust.			Remove from exposure immediately; get immediate medical attention.		
Skin		Severe pain, stinging sensation, severe burns and vesiculation, and possibly brownish stains.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Severe pain, loss of corneal epithelium despite irrigation, swelling of the eyelids, and increased intraocular pressure. Corneal anesthesia is possible, allowing damage to occur before warning discomfort is felt.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Immediate pain, circumoral burns, corrosion of the mucous membranes, profuse salivation, inability to swallow or speak. Shock with marked hypotension, weak and rapid pulse, shallow respiration, and clammy skin may occur.			Do <i>not</i> eat or drink in the laboratory.			Do not induce vomiting; give large amounts of water or milk; when vomiting occurs keep head lower than hips; get medical attention immediately.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Aniline										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
62-53-3	liquid	colorless	fishy	70	184	N/A	1.022	0.6 @ 20	3.2	3.5%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Regular dry chemical, carbon dioxide, regular foam, alcohol resistant foam		
Inhalation		May cause effects as described under ingestion.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention immediately.		
Skin		Irritation, sensitization dermatitis, readily absorbed through the skin, and a small amount absorbed from clothes or shoes may cause toxic symptoms as described in acute ingestion.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Redness, pain, and possible corneal damage.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Headache, nausea, vomiting, chest or abdominal pain, dryness of the throat, cyanosis, lips, tongue and mucous membranes may be navy blue to black and the skin may appear slate gray, central nervous system effects may include confusion, irritability, vertigo, numbness of extremities, pain in joints, and drowsiness. Aniline crosses the placental barrier and exposure during pregnancy may affect the fetus.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately; if vomiting occurs, keep head lower than hips; get medical attention immediately.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

trans-p-Anisalacetophenone

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
959-33-1	solid	yellow	N/A	N/A	N/A	73–76	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritant, may be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritant, may be harmful to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes, may be harmful.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

p-Anisaldehyde										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
123-11-5	liquid	colorless	floral	116	118–121	-1	1.119–1.123	133.5 @ 73	4.7	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, flames, sparks			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		N/A			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		N/A			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion					Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Anisole										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
100-66-3	liquid	colorless	licorice-like	43	155	N/A	0.9961	10 @ 42.2	3.7	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water		
Inhalation		Irritation, dizziness, or suffocation			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion					Do not eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Azobenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
103-33-3	solid	orange	N/A	>143	293	69	1.203	1 @ 103	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		Coughing, shortness of breath, dizziness, dullness, bluish skin, and faintness.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, possibly absorbed through intact skin with dizziness, dullness, bluish skin and faintness, all symptoms of methemoglobinemia.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, redness, and pain.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Abdominal pain, dizziness, dullness, bluish skin, faintness, and methemoglobinemia.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately; if vomiting occurs, keep head lower than hips; get medical attention.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1,1'-Azobis(cyclohexanecarbonitrile)

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
2094-98-6	solid	white	N/A	N/A	N/A	115–118	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Capable of creating a dust explosion. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions.			No flames, no sparks, no contact with hot surfaces.			Smother with dry sand, limestone, or clay. A Class D extinguisher may be used.		
Inhalation		May be harmful if inhaled. Irritating to respiratory system. Prolonged exposure can cause nausea, headache, and vomiting.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Benzaldehyde

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
100-52-7	liquid	colorless	almond-like	63	178	-26	1.0415 @ 10	1 @ 26.2	3.65	0.29%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water		
Inhalation		Sore throat, and coughing, central nervous system depression with nausea, vomiting, headache, lightheadedness.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		irritation, redness, pain, weak local anesthesia, possible absorption through the skin.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, lacrimation, redness, pain, and eye injury.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Sore throat, central nervous system depression, nausea, vomiting, abdominal pain, headache, dizziness, dullness, convulsions, and respiratory failure.			Do not eat or drink in the laboratory.			Contact physician immediately; if vomiting occurs, keep head lower than hips; get medical attention immediately.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Benzamide										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
55-21-0	solid	colorless	N/A	180	288	130	1.341	N/A	N/A	1.35%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		N/A			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		N/A			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		N/A			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Headache, shortness of breath, dullness, drowsiness, nausea, vomiting, and central nervous system depression.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Benzanilide										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
93-98-1	solid	colorless	N/A	N/A	117–119	N/A	1.315	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, carbon dioxide, water, regular foam		
Inhalation		N/A			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		May be absorbed through the skin			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		N/A			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Benzenesulfonyl Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
98-09-9	liquid	colorless	N/A	132	251– 252 dec	14.5	1.4	1.3 @ 20	N/A	reacts
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard., slight explosion hazard			N/A			Regular dry chemical, regular foam, water		
Inhalation		Acidic corrosive action: sore throat, coughing, choking, weakness and labored breathing, tightness in the chest, dizziness, cyanosis, and low blood pressure.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention immediately.		
Skin		Redness, pain, and serious burns.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Irritation, burns, and permanent corneal damage.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Severe burning pain in the mouth, throat and abdomen, nausea, vomiting, diarrhea, sudden drop in blood pressure.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately; give large amounts of water or milk, allow vomiting to occur; when vomiting occurs, keep head lower than hips; get medical attention immediately.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Benzilic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
76-93-7	powder	white	N/A	N/A	187	150–153	N/A	N/A	N/A	1.758 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful by inhalation.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		May cause eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen			Mutagenicity			Not a known mutagen		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Benzoic Acid										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
65-85-0	solid	white	varying sharp	121	249	122	1.2659 @ 15	1 @ 96	4.2	2.9% @ 20
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, carbon dioxide, water, regular foam		
Inhalation		Irritation, sore throat, and coughing			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Irritation and redness			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation and redness			Safety goggles.			Thoroughly wash eyes with water for several minutes, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Sore throat, gastric pain, nausea, vomiting, and allergic reactions			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Benzoyl Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
98-88-4	liquid	colorless	pungent	68	197	N/A	1.211	1 @ 32	4.88	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Carbon dioxide, regular dry chemical		
Inhalation		Irritation, burns, sore throat, coughing, labored breathing, pulmonary edema, liver and kidney damage.			Ventilation, local exhaust.			Remove from exposure immediately; keep warm and at rest, get medical attention immediately.		
Skin		Irritation, redness, pain, and burns.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Irritation, redness, pain, blurred vision, and severe eye burns.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.		
Ingestion		Immediate pain and severe burns of mucous membranes of the mouth and throat and gastrointestinal tract, nausea, vomiting, abdominal pain, diarrhea, and central nervous system depression.			Do <i>not</i> eat or drink in the laboratory.			If person conscious, give water or milk; if vomiting occurs, keep head lower than hips; get medical attention immediately.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Benzyl Bromide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
100-39-0	liquid	colorless	N/A	86	198–199	-3 – -1	1.439	0.242 @17	5.8	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Water hydrolyzes material liberating acidic gas that in contact with metal surfaces can generate flammable and/or explosive hydrogen gas. Emits toxic fumes under fire conditions.		Avoid heat, sparks, flames.		Carbon dioxide, dry chemical powder or appropriate foam. Do not use water.				
Inhalation		Do not breathe vapor. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache nausea and vomiting. Target organ; central nervous system.		Ventilation, local exhaust.		Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.				
Skin		Do not get on skin. Material is extremely destructive to tissue of the upper mucous membranes. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache nausea and vomiting.		Protective gloves and clothing.		Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.				
Eyes		Do not get in eyes. Lachrymator.		Safety goggles.		Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.				
Ingestion		Harmful if swallowed. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache nausea and vomiting.		Do <i>not</i> eat or drink in the laboratory.		If swallowed, wash out mouth with water provided person is conscious. Call a physician.				
Carcinogenicity		Not a known carcinogen				Mutagenicity		Not a known mutagen		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Benzyltriphenylphosphonium Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1100-88-5	solid	off-white	faint	>299	N/A	300	1.18 @ 25	N/A	N/A	moderately soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			Avoid heat, sparks, flames.		Regular dry chemical, carbon dioxide, water, regular foam.			
Inhalation					Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Absorption through skin: depression, diarrhea or irritability.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation, death in animals.			Safety goggles.		Thoroughly wash eyes with water for several minutes, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Depression, labored breathing, diarrhea; kidneys, liver, and lungs may be affected.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Bicyclo[2.2.1]hept-5-en-cis-endo-2,3-dicarboxylic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
3853-88-1	solid	colorless	N/A	N/A	N/A	191–193	N/A	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		Irritation*			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation*			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation*			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		N/A			Do not eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.*			Mutagenicity			Not a known mutagen.*		

*Toxicological information for the listed chemical is *not* available. Information given pertains to **cyclohexane-cis-1,2-dicarboxylic acid** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Bicyclo[2.2.1]hept-5-en-endo-2,3-dicarboxylic Anhydride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
129-64-6	solid	white	N/A	N/A	N/A	164–165	1.417	N/A	N/A	reacts
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		SEVERE fire hazard.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, sand, earth, regular foam.		
Inhalation		Irritation, runny or stuffy nose, wheezing, asthmatic symptoms, central nervous system depression, headache, nausea, and vomiting.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, absorption through skin may cause central nervous system depression, headache, nausea, and vomiting.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Symptoms as given in acute skin contact.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Symptoms as given in acute inhalation.			Do not eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Borane-THF Solution										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
14044-65-6	liquid	colorless	irritating	-17	>69	N/A	0.898	N/A	N/A	reacts
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		Irritation, headache, nausea, and vomiting.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Headache, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Bromine										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7726-95-6	liquid	brown to red	irritating	N/A	59	N/A	3.12	175 @ 20	7.14	4%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials			Regular dry chemical, carbon dioxide, regular foam		
Inhalation		Irritation, copious mucous secretion, coughing, nosebleeds, and headache. Delayed symptoms: nausea, diarrhea and abdominal pains, pulmonary edema, pneumonitis or pneumonia.			Ventilation, local exhaust.			Remove from exposure immediately; get immediate medical attention.		
Skin		Cooling sensation, burning sensation, redness, pain, brown discoloration, blisters, discharging pustules, destructive burns and deep-seated ulcers.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Redness, pain, blurred vision, burns, lacrimation, photophobia, loss of vision			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.		
Ingestion		Burns of the mouth, throat and stomach, brown discoloration and corrosion of the tongue and mucous membranes, sore throat, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately; give large amounts of water or milk and allow vomiting to occur; when vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Bromoacetanilide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
103-88-8	solid	off-white	N/A	N/A	N/A	167–169	1.717	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be irritating if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Toxic, harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Bromobenzene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-86-1	liquid	colorless	pleasant	51	156	N/A	1.49	3 @ 20	5.41	0.045%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.			No heat, no flames, no sparks		Alcohol resistant foam, carbon dioxide, regular dry chemical, water.			
Inhalation		Irritation, headache, sore throat, coughing, shortness of breath, nausea, vomiting, and dizziness.			Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.			
Skin		Irritation, redness, abdominal pain, nausea, vomiting, diarrhea, headache, dullness, and central nervous system effects.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention.			
Eyes		Irritation, redness, and pain.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Headache, abdominal pain, gastrointestinal irritation, nausea, vomiting, diarrhea, dizziness, and central nervous system effects.			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs keep head lower than hips, get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1-Bromobutane										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
109-65-9	liquid	colorless	N/A	22	99-101	N/A	1.3	150 @ 25	4.7	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		SEVERE fire hazard.			No open flames, no sparks, no contact with hot surfaces. Vapors or gases may ignite at distant ignition sources.			Regular dry chemical, carbon dioxide, water, regular foam		
Inhalation		Irritation of mucous membranes, narcosis			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, burns			Protective gloves and clothing.			Remove contaminated clothes and jewelry. Thoroughly wash skin with water. Get medical attention immediately.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.		
Ingestion		Gastrointestinal disturbances, possibly narcosis.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs keep head lower than hips. Get medical attention immediately.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1-Bromoethylbenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
585-71-7	liquid	colorless	N/A	81	94 @ 16 torr	49.5–50.5	1.356	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritating to respiratory system. Vapor or mist is irritating to the mucous membranes and respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Harmful if absorbed through skin. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		Harmful if swallowed. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache nausea and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

2-Bromohexane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
111-25-1	liquid	colorless	N/A	135	154–158	-85	1.176	<10	5.7	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible. Emits toxic fumes under fire conditions.*			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled. Irritating to respiratory system.*			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.*			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Irritating to the eyes.*			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.*			Do <i>not</i> eat, drink, or smoke during work.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

* Toxicological information for the listed chemical is *not* available. Information given pertains to **1-bromohexane** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

2-Bromonitrobenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
577-19-5	solid	yellow	distinct	>110	261	40-42	1.62	N/A	7.0	almost insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, flames, and sparks.			Regular dry chemical, regular foam, water		
Inhalation		Irritation. If sufficient amounts are absorbed, methemoglobinemia may occur.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Irritation. Skin absorption may occur and may result in methemoglobinemia as detailed in ingestion.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.		
Ingestion		Nausea and vomiting, abdominal pain, coma, and paralysis.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Bromonitrobenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
586-78-7	solid	off-white	N/A	N/A	255–256	125–127	1.934	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, regular foam, water		
Inhalation		Irritation and possibly conditions detailed in inhalation			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, skin absorption may occur and may result in conditions detailed in inhalation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.		
Ingestion		Nausea and vomiting, abdominal pain, confusion, irritability, tremor, memory loss, anorexia, emaciation, headache, slurred speech, conjunctivitis			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Bromophenol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
106-41-2	solid	white to off-white	N/A	N/A	235–236	64–68	1.840 @ 15	negligible	N/A	>10%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			Avoid heat, sparks, flames.		Regular dry chemical, carbon dioxide, water, regular foam			
Inhalation		Irritation			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation, depigmentation			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.			
Ingestion		Rapidly absorbed from the gastroenteric tract, nausea and vomiting, abdominal pain.			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips, get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1-Bromopropane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
106-94-5	liquid	colorless	N/A	22	71	-110	1.353	100 @18	4.25	0.25 g/100 mL:
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable liquid and vapor.			NO open flames or sparks.			Dry chemical, alcohol foam or carbon dioxide. Water may be ineffective.		
Inhalation		Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. A central nervous system depressant.			Local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention.		
Skin		Causes irritation to skin. Symptoms include redness, itching, and pain.			Protective gloves and clothing..			Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention.		
Eyes		Causes irritation, redness, and pain.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.		
Ingestion		Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.			Do <i>not</i> eat or drink in the laboratory.			Give large amounts of water to drink. Get medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Bromo-2-chloroacetanilide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
3460-23-9	solid	colorless	N/A	N/A	N/A	151	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Moderate fire hazard.		No flames, no sparks, no contact with hot surfaces		Regular dry chemical, carbon dioxide, water, regular foam.				
Inhalation		Irritation, may be harmful.*		Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.				
Skin		Irritation, may be harmful if absorbed through skin.*		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Irritation.*		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.				
Ingestion		Irritation, may be harmful.*		Do not eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.				
Carcinogenicity		Not a known carcinogen.*		Mutagenicity		Not a known mutagen.*				

*Toxicological information for the listed chemical is *not* available. Information given pertains to **2-chloroacetanilide** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Bromo-2-chloroaniline

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
38762-41-3	solid	colorless	N/A	N/A	N/A	70–72	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Low fire hazard.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		Harmful if in contact with skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Harmful to eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water.		
Carcinogenicity		Not a known carcinogen			Mutagenicity			Not a known mutagen		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Bromo-2-chloro-6-iodoaniline

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
147-82-0	liquid	beige	N/A	N/A	300	120–122	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions. *			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Highly Toxic if inhaled. *			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Toxic if absorbed through skin. Causes skin irritation. *			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Harmful to the eyes. *			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Highly toxic if swallowed. *			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Carcinogen *			Mutagenicity			Not a known mutagen.*		

* Toxicological information for the listed chemical is not available. Information given pertains to **2,4,6-tribromoaniline** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

1-Bromo-3-chloro-5-iodobenzene											
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol	
13101-40-1	solid	colorless	N/A	N/A	N/A	85.8	N/A	N/A	N/A	insoluble	
Types of Hazard/Exposure		Acute Hazards/Symptoms				Prevention			First Aid/Fire		
Fire		Moderate fire hazard.				<i>No flames, no sparks, no contact with hot surfaces</i>			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		Respiratory tract effects, central nervous system, effects, and possibly corrosion.*				Ventilation, local exhaust.			Remove from exposure immediately, artificial respiration if needed; get medical attention.		
Skin		Irritation, possibly corrosion.*				Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Lacrimation, irritation, and possibly corrosion.*				Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		N/A				Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.*				Mutagenicity			Not a known mutagen.*		

*Toxicological information for the listed chemical is *not* available. Information given pertains to **1,3,5-tribromobenzene** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Bromo-2-methylbutane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol			
507-36-8	liquid	colorless	N/A	4	107	N/A	1.182	N/A	N/A	N/A			
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire					
Fire		Severe fire hazard; vapors may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, dry chemical powder, foam, water.					
Inhalation		May be harmful.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.					
Skin		Irritation, may be harmful if absorbed through skin.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.					
Eyes		Irritation, may be harmful.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.					
Ingestion		May be harmful.			Do not eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.					
Carcinogenicity					Not a known carcinogen.					Mutagenicity		Not a known mutagen.	

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1-Butanol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
71-36-3	liquid	colorless	irritating	29	117	N/A	0.81	6.5 @ 25	2.55	7.7%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		SEVERE fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water		
Inhalation		25 ppm: irritation. At 50 ppm: sore throat, coughing, nausea, and central nervous system depression with headache and dizziness.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		irritation with redness and dryness, may be absorbed through skin			Protective gloves and clothing.			Remove contaminated clothes and jewelry. Thoroughly wash skin with water.		
Eyes		moderate temporary injury			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediatly.		
Ingestion		abdominal pain, nausea, vomiting, and diarrhea. High doses: complete paralysis, reduction of body temperature and respiration.			Do not eat or drink in the laboratory.			Contact physician immediately. If vomiting occurs, keep head lower than hips; get medical attention immediately.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Butanol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
78-92-2	liquid	colorless	strong, pleasant	24	94	-115	0.81	13 @ 20	2.6	15 g/ 100 mL.
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces			Foam, powder, alcohol-resistant foam, water spray, carbon dioxide.		
Inhalation		Dizziness. Drowsiness. Headache.			Local exhaust.			Fresh air, rest. Refer for medical attention.		
Skin		Dry skin.			Protective gloves and clothing..			Remove contaminated clothes. Rinse skin with plenty of water or shower.		
Eyes		Redness. Pain. Blurred vision.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if possible; seek medical attention.		
Ingestion		Dizziness. Drowsiness. Headache.			Do <i>not</i> eat or drink in the laboratory.			Rinse mouth. Give plenty of water to drink. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Butanone										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
78-93-3	liquid	colorless	sharp, mint-like	-9	80	-86	.805	78 @ 20	2.5	29 g/ 100 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Highly flammable.			No flames, no sparks, no contact with hot surfaces			Powder, AFFF, foam, carbon dioxide.		
Inhalation		Cough. Dizziness. Dullness. Headache. Nausea. Shortness of breath. Unconsciousness. Vomiting.			Local exhaust.			Fresh air, rest. Refer for medical attention.		
Skin		MAY BE ABSORBED! Redness.			Protective gloves and clothing.			Remove contaminated clothes. Rinse skin with plenty of water or shower.		
Eyes		Redness. Pain.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if easily possible; seek medical attention.		
Ingestion		Dizziness. Drowsiness. Headache.			Do not eat or drink in the laboratory.			Rinse mouth. Give plenty of water to drink. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

3-Buten-2-one

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
78-94-4	liquid	colorless	irritating	-6	81	N/A	0.842	120 @ 34	1.3	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		SEVERE fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces		Alcohol resistant foam, carbon dioxide, regular dry chemical, water			
Inhalation		Coughing, choking, pain, burns, pulmonary edema, tightness in the chest, cyanosis, dizziness, low blood pressure; central nervous system depression, headache, nausea, and vomiting.			Ventilation, local exhaust.		Remove from exposure immediately; keep warm and at rest; get medical attention immediately.			
Skin		Irritation, pain, burns; absorption through the skin may cause central nervous system depression, headache, dizziness, nausea, vomiting.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.			
Eyes		Irritation, pain, and burns.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water until medical help arrives.			
Ingestion		Immediate pain and severe burns, discoloration of the tissues, swallowing and speech may be difficult or impossible, and shock.			Do not eat or drink in the laboratory.		Give water or milk; if vomiting occurs, keep head lower than hips; get medical attention immediately.			
Carcinogenicity		Possible carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

<i>n</i>-Butyl Acetate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
123-86-4	liquid	colorless	mild, fruity	26	126	-77	.8826	15 @ 25	4.0	ca. 0.7%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Highly flammable.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces			Powder, AFFF, foam, carbon dioxide.		
Inhalation		Cough. Dizziness. Dullness. Headache. Nausea.			Local exhaust or breathing protection.			Fresh air, rest. Refer for medical attention.		
Skin		Dry skin. Redness.			Protective gloves and clothing.			Remove contaminated clothes. Rinse skin with plenty of water or shower.		
Eyes		Redness. Pain.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if easily possible; seek medical attention.		
Ingestion		N/A			Do <i>not</i> eat or drink in the laboratory.			Rinse mouth. Do <i>not</i> induce vomiting. Rest. Refer for medical attention.		
Carcinogenicity				Not a known carcinogen.				Mutagenicity		Not a known mutagen.

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

tert-Butyl Peroxybenzoate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
614-45-9	liquid	colorless to light yellow	N/A	93	75–76 @ 0.2 torr	8	1.021	3.36 @ 50	6.7	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Contact may cause fire, may accelerate fires. Emits toxic fumes under fire conditions.			No open flames or sparks. No Smoking.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		May be harmful if absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		May be harmful to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

n-Butylbenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
104-51-8	liquid	colorless	mild aromatic	54	182–183	-88	0.86	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible and flammable liquid. Emits toxic fumes under fire conditions.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful by inhalation. Do not breathe vapor.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May be harmful absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		May cause eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do not eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

sec-Butylbenzene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
135-98-8	liquid	colorless	mild aromatic	45	173–174	-75	0.863	4	N/A	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			No flames, no sparks, no contact with hot surfaces.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do not eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

<i>tert</i>-Butylbenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
98-06-6	liquid	colorless	mild aromatic	34	169	-58	0.867	4.79 @ 37.7	3.16 @ 169	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, dry chemical powder or appropriate foam. Water may cool, but <i>not</i> extinguish.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		May be harmful if absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		May be harmful to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Calcium Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
10043-52-4	solid	colorless	N/A	N/A	>1600	782	2.15 @ 25	N/A	N/A	74.5% @ 20

Types of Hazard/Exposure	Acute Hazards/Symptoms	Prevention	First Aid/Fire
Fire	Negligible fire hazard.	N/A	Use extinguishing agents appropriate for surrounding fire.
Inhalation	Irritation, coughing, and shortness of breath.	Ventilation, local exhaust.	Remove from exposure immediately; get medical attention.
Skin	Severe irritation, erythema, blistering, exfoliation, and ulceration.	Protective gloves and clothing.	Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.
Eyes	Irritation, redness, pain, and superficial injury.	Safety goggles.	Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.
Ingestion	Abdominal spasms, nausea, gastrointestinal tract or cardiovascular irregularities.	Do <i>not</i> eat or drink in the laboratory.	If vomiting occurs, keep head lower than hips; get medical attention, if needed.
Carcinogenicity	Not a known carcinogen.	Mutagenicity	Not a known mutagen.

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Calcium Hypochlorite

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7778-54-3	granular powder	off-white	N/A	N/A	N/A	100	2.350	N/A	N/A	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Contact with other material may cause fire. Contact with combustible material may cause fire. Contact with water liberates a toxic gas. Emits toxic fumes under fire conditions.			No open flames or sparks.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful if inhaled. Irritating to respiratory system. Do <i>not</i> breathe in dust. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		Causes skin irritation. Causes burns.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Causes severe eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Harmful if swallowed. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Carbon, Decolorizing

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7440-44-0	solid	black	odorless	N/A	N/A	N/A	1.8–2.1	1 @ 3586	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Severe fire hazard., may ignite on exposure to air.			No flames, no sparks, no contact with hot surfaces		Regular dry chemical, sand, earth, regular foam, water			
Inhalation		Mucous membrane irritation			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		N/A			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.			
Ingestion		N/A			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Carvone										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
2244-16-8	liquid	colorless	spice-like	98	230	N/A	0.9608	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water.		
Inhalation		Irritation.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Erythema, skin absorption may occur.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion					Do not eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Carvone 2,4-Dinitrophenylhydrazone

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1567-89-1	solid	red	N/A	N/A	N/A	126–128	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Non-flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled. Very irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Dust, vapor, or mist may be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Celite										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
61790-53-2	solid	white to off-white	odorless	N/A	2230	1700	1.9–2.35	none	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Physical discomfort of the upper respiratory tract, coughing, silicosis.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Mechanical irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Mechanical irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Chemically and biologically inert on ingestion.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Ceric Ammonium Nitrate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
16774-21-3	solid	yellow to red	odorless	N/A	N/A	N/A	N/A	N/A	N/A	142.6% @ 25
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials			Water		
Inhalation		Severe irritation, sore throat, coughing, and shortness of breath.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, redness, and pain.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, redness, and pain.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Burning sensation, abdominal pain, nausea, vomiting, and diarrhea.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Chlorobenzaldehyde										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
104-88-1	solid	white	N/A	87	213–214	45	1.196 @ 61	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water		
Inhalation		Irritation, tracheobronchitis, pulmonary edema, bronchopneumonia, and bronchospasms.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, erythema, swelling, nerve irritation, hyperemia, and pigmentation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Strong irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion					Do not eat or drink in the laboratory.			Contact physician immediately. If vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Chloroacetanilide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
539-03-7	powder	white	N/A	N/A	331.3– 332.4 @ 740	177–179	1.385	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Low fire hazard. Emits toxic fumes under fire conditions.			No open flames or sparks.			Water spray, Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritant if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		Irritant to skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Irritant to eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Chloroacetyl Chloride										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
79-04-9	liquid	colorless	N/A	N/A	105–106	-22	1.418	60	3.9	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Dry chemical, foam, or carbon dioxide.		
Inhalation		Toxic. Corrosive. Lachrymator. Toxic by inhalation. Inhalation may result in spasm, inflammation, and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Harmful if in contact with skin. Causes burns.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Harmful to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Toxic if swallowed. Exposure to and/or consumption of alcohol may increase toxic effects. Exposure can cause, burning sensation, wheezing, laryngitis, shortness of breath, headache, coughing, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Chlorobenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-90-7	liquid	colorless	almond-like	28	132	-45	1.107	11.8 @ 25	3.9	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Gives off irritating or toxic fumes (or gases) in a fire.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.			Powder, water spray, foam, carbon dioxide.		
Inhalation		Drowsiness. Headache. Nausea. Unconsciousness.			Ventilation, local exhaust., or breathing protection.			Fresh air, rest. Refer for medical attention.		
Skin		Redness. Roughness.			Protective gloves and clothing.			First rinse with plenty of water, then remove contaminated clothes and rinse again. Refer for medical attention.		
Eyes		Redness.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if possible; seek medical attention.		
Ingestion		Abdominal pain.			Do <i>not</i> eat or drink in the laboratory.			Rinse mouth. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Chlorobenzoic acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
118-91-2	solid	white	N/A	173	285	138–140	1.54	0.189 @101	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be irritating if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Toxic, harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

4-Chlorobenzoic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol	
74-11-3	solid	colorless	N/A	238	N/A	239-241	1.541 @ 24	N/A	N/A	soluble	
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire				
Fire		Slight fire hazard.			Avoid heat, sparks, flames.		Regular dry chemical, carbon dioxide, water, regular foam.				
Inhalation		Irritation			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.				
Skin		Irritation, absorption may occur			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Irritation			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.				
Ingestion					Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips, get medical attention, if needed.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Chlorobenzyl Alcohol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
873-76-7	solid	white	N/A	N/A	234	70-72	N/A	N/A	N/A	poorly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Moderate fire hazard.		<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.		Carbon dioxide, dry chemical powder, foam, water.				
Inhalation		May be harmful.		Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.				
Skin		Irritation, may be harmful if absorbed through skin.		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Irritation.		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.				
Ingestion		May be harmful.		Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1-Chlorobutane										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
109-69-3	liquid	colorless	unpleasant	-9	78	-123	0.89	80 @20	3.2	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Highly flammable. Gives off irritating or toxic fumes (or gases) in a fire.			No flames, no sparks, no contact with hot surfaces.			Powder, AFFF, foam, carbon dioxide.		
Inhalation		Cough. Drowsiness. Sore throat.			Local exhaust.			Fresh air, rest. Refer for medical attention.		
Skin		Redness.			Protective gloves and clothing.			Remove contaminated clothes. Rinse skin with plenty of water or shower.		
Eyes		Redness.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if possible; seek medical attention.		
Ingestion		Abdominal cramps. Nausea.			Do not eat or drink in the laboratory.			Rinse mouth. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

α -Chloro-2,6-dimethylacetanilide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1131-01-7	solid	white	N/A	N/A	N/A	150–151	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire	Flammable, emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Dry chemical, foam, or carbon dioxide.			
Inhalation	Irritating, may be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.			
Skin	Irritating, may be harmful if absorbed through the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.			
Eyes	Irritating, may be harmful to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.			
Ingestion	Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.			
Carcinogenicity	Not a known carcinogen.			Mutagenicity			Not a known mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

2-Chloro-2-methylbutane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
594-36-5	liquid	colorless	N/A	-9	85–86	-73	0.866	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		SEVERE fire hazard. Vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.		Alcohol resistant foam, carbon dioxide, regular dry chemical, water			
Inhalation		Irritation, narcotic			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation, central nervous system depression			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.			
Ingestion		Narcotic			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Chloroform										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
67-66-3	liquid	colorless	sweet	N/A	60.5–61.5	-63	1.492	160 @ 20	4.12	0.82% @ 20
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Regular dry chemical, regular foam, water.		
Inhalation		Irritation, central nervous system depression may be preceded by excitation and inebriation, dizziness, headache, fatigue, salivation, nausea, and vomiting.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Inflammation, destruction of the epithelium, moderate necrosis; some absorption possible, resulting in weight loss and degenerative kidney changes.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Burning pain, lacrimation, redness, damage to corneal epithelium.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Burning of the mouth, throat, esophagus, and stomach, nausea, vomiting, diarrhea, cyanosis, muscle cramps, irregular respiration, respiratory failure, and liver damage.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Suspect carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Chloroplatinic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
16941-12-1	solid	brownish-yellow	odorless	N/A	115	60	2.43	N/A	18	very soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Not considered to be a fire hazard.		Keep away from steel and other common metals.		Water spray, carbon dioxide, or dry powder.				
Inhalation		Exposure can cause severe allergies affecting the nose, skin and lungs. Irritation and even ulcers can develop in the nose. May cause platinosis. Symptoms include wheezing, coughing, tightness of the chest, shortness of breath, cyanosis, and pronounced asthmatic symptoms.		Ventilation, local exhaust., or breathing protection.		Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.				
Skin		May cause platinosis; symptoms may include severe irritation, eczema, urticaria, itching, and dermatitis. May cause skin allergy.		Protective gloves and clothing.		Immediately flush skin with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention.				
Eyes		May cause irritation, itching, and conjunctival vasodilation.		Safety goggles.		Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.				
Ingestion		May cause vomiting and bloody diarrhea.		Do <i>not</i> eat or drink in the laboratory.		Induce vomiting immediately as directed by medical personnel. Get medical attention.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Chlorosulfonic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7790-94-5	liquid	colorless	pungent	N/A	158	N/A	1.753	1 @ 20	4.02	reacts
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard., reacts violently with water.			N/A		Carbon dioxide, regular dry chemical.			
Inhalation		Severe mucous membrane irritation, coughing, choking, headache, dizziness and weakness.			Ventilation, local exhaust.		Remove from exposure immediately; get immediate medical attention.			
Skin		Severe irritation, pain, burns, and brownish or yellowish stains			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.			
Eyes		Corneal and conjunctival edema, iritis, corneal erosion and opacity, pain, blurred vision, and photophobia.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible; seek medical attention immediately, and continue to wash eyes with water.			
Ingestion		Severe burning pain in the mouth, throat and abdomen, nausea, vomiting, diarrhea, and bloody stools.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately; give large amounts of water or milk; allow vomiting to occur; when vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Chromic Anhydride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1333-82-0	solid	dark red	odorless	N/A	decomposes	197	2.7	N/A	N/A	63 g/100 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Not combustible but enhances combustion of other substances. Many reactions may cause fire or explosion.			No contact with combustible substances and reducing agents.		Powder, water spray, foam, carbon dioxide.			
Inhalation		Cough. Labored breathing. Shortness of breath. Sore throat. Wheezing.			Avoid inhalation of fine dust and mist. Ventilation (not if powder), local exhaust.		Fresh air, rest. Refer for medical attention.			
Skin		Redness. Skin burns. Pain.			Protective gloves and clothing.		Remove contaminated clothes. Rinse skin with plenty of water or shower.			
Eyes		Redness. Pain. Permanent loss of vision. Severe deep burns.			Safety goggles.		First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.			
Ingestion		Abdominal cramps.			Do <i>not</i> eat or drink in the laboratory.		Rinse mouth. Do <i>not</i> induce vomiting. Give plenty of water to drink. Refer for medical attention.			
Carcinogenicity		Known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cinnamaldehyde

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
104-55-2	oily liquid	yellowish	cinnamon	71	248	-80	1.05	0.03 @ 25	4.6	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible liquid. Fire hazard when exposed to heat or flame.			No flames, no sparks, no contact with hot surfaces.			Dry chemical, foam, or carbon dioxide.		
Inhalation		Causes irritation to the respiratory tract. Symptoms may include coughing or shortness of breath.			Ventilation, local exhaust.			Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.		
Skin		Causes irritation to skin. Symptoms include redness, itching, and pain. May cause allergic reaction in sensitive individuals.			Protective gloves and clothing.			Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists.		
Eyes		Causes irritation, redness, and pain.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.		
Ingestion		May cause vomiting and bloody diarrhea.			Do not eat or drink in the laboratory.			If swallowed, do not induce vomiting. Give large quantities of water. Get medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

trans-Cinnamic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
140-10-3	solid	white	N/A	N/A	300	132–135	1.248	N/A	N/A	0.446 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritant, may be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritant, may be harmful to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes, may be harmful.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

N-Cinnamyl-*m*-nitroaniline

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
22774-96-5	solid	N/A	N/A	N/A	N/A	115	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		NA*			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		NA*			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		NA*			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		NA*			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		NA*			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		N/A*			Mutagenicity			N/A*		

* Toxicological information for the listed chemical is *not* available; refer to **aniline** and ***m*-nitroaniline**.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

N-Cinnamylidene-*m*-nitroaniline

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
22856-77-5	solid	N/A	N/A	N/A	N/A	92	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		NA*			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		NA*			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		NA*			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		NA*			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		NA*			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		NA*			Mutagenicity			NA*		

* Toxicological information for the listed chemical is *not* available; refer to **cinnamaldehyde** and ***m*-nitroaniline**.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Citral										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
5392-40-5	liquid	colorless	sharp lemon-like	90	207	N/A	0.88	N/A	N/A	insoluble in water
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Not considered a fire hazard.			Keep away from open flames and sparks.			Carbon dioxide, dry chemical, Universal-Type Foam.		
Inhalation		May be irritating if inhaled.			Ventilation or local exhaust.			Remove from the exposure to fresh air. Contact a physician as necessary.		
Skin		May be irritating to skin.			Protective gloves and clothing.			Remove any contaminated clothing or shoes. Wash affected areas thoroughly with soap and water for at least 15 minutes. Contact a physician as necessary.		
Eyes		May be irritating to eyes.			Safety goggles.			Flush immediately with clean water for at least 15 minutes. Contact a physician immediately.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory..			Give water to dilute. Contact a physician immediately.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cupric Acetate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
6046-93-1	solid	green	N/A	N/A	N/A	250 (dec)	1.882	N/A	6.9	7.2%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			Avoid heat, sparks, flames.		Regular dry chemical, carbon dioxide, water, regular foam.			
Inhalation		Sore throat, coughing, shortness of breath, digestive disorders, fever, and illness similar to the common cold, with sensations of chills and stuffiness of the head.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Redness, pain, and irritation.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Redness, pain, blurred vision, possibly conjunctivitis, corneal ulcerations, and turbidity.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Sore throat, salivation, abdominal pain, vomiting, diarrhea, and hemorrhagic gastritis.			Do <i>not</i> eat or drink in the laboratory.		Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cupric Sulfate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7758-98-7	solid	blue, (pentahydrate)	N/A	N/A	N/A	200	3.603	N/A	N/A	14.3% @ 0

Types of Hazard/Exposure	Acute Hazards/Symptoms	Prevention	First Aid/Fire
Fire	Negligible fire hazard.	N/A	Regular dry chemical, carbon dioxide, water, regular foam
Inhalation	Sore throat, coughing, shortness of breath, chest pain, a metallic taste, spasm, inflammation, edema of larynx and bronchi, headache, nausea, chemical pneumonitis, pulmonary edema, and laryngitis. Corrosive to mucous membranes.	Ventilation, local exhaust.	Remove from exposure immediately; get medical attention.
Skin	Redness, pain, itching, papulovesicular and eczematoid lesions, and corrosive to skin.	Protective gloves and clothing..	Remove contaminated clothes and jewelry, thoroughly wash skin with water.
Eyes	Irritation, redness, pain, blurred vision, and corrosive to eyes. Copper deposition in the cornea.	Safety goggles.	Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.
Ingestion	Sore throat, gastroenteric pain, blue discoloration of gums and tongue, hepatic cirrhesis, brain damage, demyelination.	Do <i>not</i> eat or drink in the laboratory.	Give water or milk; if vomiting occurs, keep head lower than hips; seek immediate medical attention.
Carcinogenicity	Not a known carcinogen.	Mutagenicity	Possible mutagen.

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cyclododecanol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1724-39-6	solid	white	N/A	N/A	125 @ 12 torr	77–78	0.961	N/A	N/A	slightly
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, carbon dioxide, water, regular foam		
Inhalation		No specific data available, possibly central nervous system depression.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, possibly skin absorption and allergic dermatitis.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		No specific data available, possibly central nervous system depression.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cyclododecanone

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
830-13-7	solid	white	N/A	118	106	60	0.906	0.8 @ 20	N/A	45 ppm @ 20

Types of Hazard/Exposure	Acute Hazards/Symptoms	Prevention	First Aid/Fire
Fire	Slight fire hazard.	Avoid heat, sparks, flames.	Regular dry chemical, carbon dioxide, water, regular foam
Inhalation	No signs of toxicity reported.	Ventilation, local exhaust.	Remove from exposure immediately, get medical attention.
Skin	Irritation.	Protective gloves and clothing.	Remove contaminated clothes and jewelry, thoroughly wash skin with water.
Eyes	Irritation.	Safety goggles.	Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.
Ingestion	N/A	Do <i>not</i> eat or drink in the laboratory.	If vomiting occurs, keep head lower than hips; get medical attention, if needed.
Carcinogenicity	Not a known carcinogen.	Mutagenicity	Not a known mutagen.

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cyclohexane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
110-82-7	liquid	colorless	sweet	-18	80.7	6.5	0.779	95 @ 20	2.90	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		SEVERE fire hazard., moderate explosion hazard, vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, carbon dioxide, water for cooling, regular foam.		
Inhalation		Irritation, central nervous system depression with headache, dizziness, dullness, nausea, vomiting, degenerative changes in the heart, lungs, liver, kidneys, and brain.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, redness, and dryness.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, tearing, redness, and conjunctivitis.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Central nervous system depression; aspiration may result in chemical pneumonitis.			Do not eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cyclohexane-*cis*-1,2-dicarboxylic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
610-09-3	solid	white	N/A	N/A	N/A	193–195	N/A	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			Avoid heat, flames, sparks		Regular dry chemical, carbon dioxide, water, regular foam.			
Inhalation		Irritation.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		N/A			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

cis-1,2-Cyclohexanediol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1792-81-0	solid	white	N/A	N/A	117@14	99-101	1.183	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire	Fire possible at elevated temperatures or by contact with an ignition source. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.			
Inhalation	Irritant to respiratory system			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.			
Skin	Irritant to skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.			
Eyes	Irritant to eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water, lifting upper and lower lids occasionally. Seek medical advice.			
Ingestion	May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.			
Carcinogenicity	Not a known carcinogen.				Mutagenicity	Not a known mutagen.				

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cyclohexanol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-93-0	liquid	colorless	pungent	67	160	20–22	0.948	1.0 @ 21	3.5	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.			Regular dry chemical, carbon dioxide, water, regular foam, alcohol resistant foam.		
Inhalation		Irritation, central nervous system depression, dizziness, drowsiness, headache, nausea, and vomiting.			Ventilation, local exhaust.			Remove from exposure immediately; get immediate medical attention.		
Skin		Irritation, defatting of the skin, absorption may lead to central nervous system depression, headache, dizziness, drowsiness, nausea, and vomiting.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, redness, pain.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Irritation, coughing, abdominal pain, diarrhea, central nervous system depression, headache, weakness, dizziness, drowsiness, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get immediate medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cyclohexanone

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-94-1	liquid	colorless	minty, sweet	46	155	-47	0.947	2 @ 20	3.4	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical.		
Inhalation		Irritation, changes in the sense of smell, respiratory system changes, narcosis, central nervous system depression, headache, dizziness, lethargy, and unconsciousness.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Irritation, burns, labored breathing, hypnotic signs, defatting, dermatitis, and peritoneal and intestinal congestion.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, pain, redness, lacrimation, and corneal injury.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Coughing, central nervous system depression, dullness, gastrointestinal irritation, and unconsciousness.			Do not eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Cyclohexanone Semicarbazone

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1589-61-3	solid	colorless	NA	NA	NA	167	1.223	NA	NA	6 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable, emits toxic fumes under fire conditions. *			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled. *			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		May be irritating to the skin. *			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Dust, vapor, or mist may be irritating to the eyes. *			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed. *			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen*			Mutagenicity			Not a known mutagen.*		

* Toxicological information for the listed chemical is *not* available. Information given pertains to **acetone semicarbazone** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Cyclohexene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
110-83-8	liquid	colorless	sweet	-20	82	-104	0.8102	67 @ 20	2.8	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		SEVERE fire hazard., vapors or gases may ignite at distant ignition sources.			NO flames, NO sparks, NO contact with hot surfaces.			Carbon dioxide, regular dry chemical, water.		
Inhalation		Irritation, central nervous system depression, headache, dizziness, drowsiness, labored breathing, and kidney and liver damage.			Ventilation, local exhaust.			Remove from exposure immediately, keep warm and at rest. get medical attention immediately.		
Skin		Defatting of the skin, redness, and burning sensation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Redness and irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Nausea, labored breathing, central nervous system involvement, pulmonary aspiration, and pneumonia.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; contact physician immediately.		
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Cyclohexene-*cis*-1,2-dicarboxylic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
935-79-5	solid	colorless	N/A	N/A	N/A	103–104	N/A	N/A	N/A	partially soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Moderate fire hazard.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.		Regular dry chemical, carbon dioxide, water, regular foam.			
Inhalation		Sore throat and coughing.*			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation.*			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Redness, pain, and irritation.*			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Irritation of the throat and abdominal spasms.*			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.*			Mutagenicity		Not a known mutagen.*			

*Toxicological information for the listed chemical is *not* available. Information given pertains to **phthalic acid** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1,3-Cyclopentadiene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
542-92-7	liquid	colorless	petroleum odor	25	40	N/A	0.8021	249 @ 12	2.3	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		SEVERE fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, carbon dioxide, water, regular foam			
Inhalation		Irritation, headache, dizziness, dullness, and central nervous system effects.			Ventilation, local exhaust.		Remove from exposure; get medical attention			
Skin		Irritation, local redness			Protective gloves and clothing.		Remove contaminated clothes and jewelry. Thoroughly wash skin with water. Seek medical attention if needed.			
Eyes		Irritation, redness, pain			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Abdominal pain, nausea			Do not eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips. Get medical attention if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Decanedioyl Dichloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
111-19-3	liquid	colorless	pungent odor	>110	168 @ 12 torr	N/A	1.121	N/A	N/A	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			Avoid heat, sparks, flames.		Carbon dioxide, regular dry chemical			
Inhalation		Irritation, coughing, choking, pain, burns, pulmonary edema, and tightness in the chest.			Ventilation, local exhaust.		Remove from exposure immediately, keep warm and at rest get medical attention immediately.			
Skin		Irritation, pain, burns			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.			
Eyes		Irritation, pain, burns			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.			
Ingestion		Pain, severe burns, discoloration of the tissues, and swallowing and speech may be difficult or impossible.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Dibasic Potassium Phosphate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7758-11-4	crystals or powder	white	odorless	N/A	N/A	>465	N/A	N/A	N/A	150 g/100 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Not considered a fire hazard.			Avoid open flames and sparks.			Use any means suitable for extinguishing surrounding fire.		
Inhalation		Not expected to be a health hazard.			Ventilation, local exhaust., or breathing protection.			Remove to fresh air. Get medical attention for any breathing difficulty.		
Skin		No adverse effects expected.			Protective gloves and clothing.			Wash exposed area with soap and water. Get medical advice if irritation develops.		
Eyes		No adverse effects expected but dust may cause mechanical irritation.			Safety goggles.			Wash thoroughly with running water. Get medical advice if irritation develops.		
Ingestion		Symptoms may include vomiting, lethargy, diarrhea, blood chemistry effects, cardiac effects and central nervous system effects.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, give several glasses of water to drink to dilute. If large amounts were swallowed or symptoms occur, get medical advice.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

<i>o</i>-Dichlorobenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
95-50-1	viscous liquid	pale yellow	odorless	66	180	-17	1.006	1.2 torr @ 20	5.1	practically insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.			Powder, water spray, foam, carbon dioxide.		
Inhalation		Cough. Drowsiness. Sore throat. Unconsciousness.			Ventilation, local exhaust., or breathing protection.			Fresh air, rest. Refer for medical attention.		
Skin		Redness. Burning sensation. Symptoms may be delayed. Blisters.			Protective gloves and clothing.			Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.		
Eyes		Redness. Pain.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if easily possible. Seek medical attention.		
Ingestion		Burning sensation. Diarrhea. Nausea. Vomiting.			Do <i>not</i> eat or drink in the laboratory.			Rinse mouth. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1,2-Dichlorobutane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
616-21-7	liquid	colorless	N/A	26	125	N/A	1.112	28	N/A	insoluble
Types of Hazard/Exposure										
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable liquid. Emits toxic fumes under fire conditions. Vapor may travel considerable distance to ignition source and flash back.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Avoid breathing vapor. Harmful if inhaled. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		Causes skin irritation. May be harmful if absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Causes eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Harmful if swallowed. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Do not eat or drink in the laboratory.			If swallowed wash out mouth with water.		
Carcinogenicity										
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

1,3-Dichlorobutane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1190-22-3	liquid	colorless	N/A	30	134	N/A	1.115	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable liquid. Emits toxic fumes under fire conditions. Vapor may travel considerable distance to ignition source and flash back.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Avoid breathing vapor. Harmful if inhaled. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		Harmful if absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Lachrymator. Causes eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Harmful if swallowed. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

1,4-Dichlorobutane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
110-56-5	liquid	colorless	NA	39	161–163	-38	1.160	NA	NA	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable liquid. Emits toxic fumes under fire conditions. Vapor may travel considerable distance to ignition source and flash back.			No flames, no sparks, no contact with hot surfaces.			Water spray, Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May be harmful if absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		May cause eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do not eat or drink in the laboratory.			If swallowed wash out mouth with water.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Dichloromethane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
75-09-2	liquid	colorless	sweet	none	40	-97	1.325	400 @ 24	2.9	1.32% @ 20
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, flames, sparks			Carbon dioxide, regular dry chemical, and water.		
Inhalation		Irritation, lightheadedness, dizziness, tingling, numbness of the extremities, sensation of heat, sensation of fullness in the head, drunkenness, mental confusion, nausea, headache, and fatigue.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, possibly burns, skin absorption may occur causing effects detailed in inhalation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Pain, and extreme irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Rapid, then slowed respiration, gastrointestinal ulceration and hemorrhage, and unconsciousness, central nervous system depression, and liver and kidney damage.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Dicyclopentadiene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
77-73-6	solid	colorless	pungent	32	164– 172 <i>dec</i>	32-35	0.979 @ 20	1.4 @ 20	4.6	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.		Alcohol resistant foam, carbon dioxide, regular dry chemical, water.			
Inhalation		Irritation of mucous membranes and upper respiratory tract, headache, vomiting, nausea, dizziness, sneezing, coughing, and narcotic effects.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Severe irritation and redness.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation, smarting, redness, and pain.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Abdominal pain, nausea, and focal hemorrhage of the kidney, intestine, stomach, bladder, and lung.			Do not eat or drink in the laboratory.		Contact a physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Diethylamine

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
109-89-7	liquid	colorless	fish-like	-29	55	-50	0.707	731	2.5	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions. Vapor may travel considerable distance to source of ignition and flashback. Container may explode under fire conditions.			Avoid heat, sparks, flames.			Dry chemical, foam, or carbon dioxide.		
Inhalation		Toxic. Corrosive. Lachrymator. Toxic by inhalation. Inhalation may result in spasm, inflammation, and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Harmful if in contact with skin. Causes burns.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Harmful to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Toxic if swallowed. Exposure to and/or consumption of alcohol may increase toxic effects. Exposure can cause, burning sensation, wheezing, laryngitis, shortness of breath, headache, coughing, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Diethyl Benzylphosphonate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1080-32-6	liquid	colorless	N/A	109	106–108	N/A	1.095	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, regular chemical powder, foam, water		
Inhalation		May be harmful.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Irritation, may be harmful if absorbed through skin.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		May be harmful.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Diethyl Ether

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
60-29-7	liquid	colorless	sweet	-40	35	-116	0.7	442 @ 20	2.6	6.9%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Severe fire hazard., severe explosion hazard, may form explosive peroxides, vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.		Alcohol resistant foam, carbon dioxide, regular dry chemical.			
Inhalation		Central nervous system depression with drowsiness, dizziness, nausea, headache, and lowering of the pulse and body temperature.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation, defatting, and drying of the skin.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Painful inflammation.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Central nervous system depression with nausea, vomiting, drowsiness, dizziness; stomach may become promptly distended, which may hinder breathing			Do not eat or drink in the laboratory.		Contact physician immediately.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

N,N-Diethyl-2,6-dimethylacetanilide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
137-58-6	solid	white	N/A	71.1	180–182 @ 4	66–69	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable, emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Dry chemical, foam, or carbon dioxide.		
Inhalation		Harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Harmful if absorbed through the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		May be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Diethylene Glycol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
111-46-6	viscous liquid	colorless	odorless	124	245	-6.5	1.12	1 @ 91.8	3.66	infinitely soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Combustible.		No flames, no sparks, no contact with hot surfaces.		Powder, alcohol-resistant foam, water in large amounts, carbon dioxide.				
Inhalation		Cough. Dizziness.		Ventilation, local exhaust.		Remove from exposure immediately; fresh air, rest.				
Skin		Redness.		Protective gloves and clothing.		Remove contaminated clothes. Rinse and then wash skin with water and soap.				
Eyes		Redness.		Safety goggles.		First rinse with plenty of water for several minutes; remove contact lenses if easily possible; seek medical attention.				
Ingestion		Abdominal pain. Nausea. Vomiting. Dizziness. Drowsiness. Unconsciousness. Confusion.		Do not eat or drink in the laboratory.		Rinse mouth. Give a slurry of activated charcoal in water to drink. Refer for medical attention.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Dimethyl Fumarate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
624-49-7	solid	colorless to white	odorless	N/A	192–193	104–107	1.37	N/A	N/A	almost insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, carbon dioxide, regular foam.		
Inhalation		Irritation, coughing, and dyspnea.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation and redness.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Relatively non-toxic; large amounts may cause sore throat, vomiting, and abdominal pain.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Dimethyl Maleate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
624-48-6	liquid	colorless	N/A	91	204–205	N/A	1.152	1 @ 45.7	4.97	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Moderate fire hazard.		No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, carbon dioxide, regular foam.				
Inhalation		Irritation, coughing, and dyspnea.		Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.				
Skin		Irritation, redness, and pain.		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Irritation, redness, pain, and corneal erosion.		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.				
Ingestion		Sore throat, abdominal pain, and vomiting.		Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Dimethyl Sulfoxide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
67-68-5	liquid	colorless	N/A	87	189	18.4	1.100	0.42	2.7	miscible
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible liquid. Emits toxic fumes under fire conditions. Can react violently with several reagents. When heated above boiling point, formaldehyde, methyl mercaptan, and sulfur dioxide are evolved.			No flames, no sparks, no contact with hot surfaces.			Water spray, Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		Readily absorbed through skin. Avoid contact with DMSO solutions containing toxic material. DMSO may carry such materials into the body.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Causes eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

2,6-Dimethylaniline

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
87-62-7	liquid	pale yellow	N/A	91	214@739	10–12	0.984	<0.01	N/A	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible. Emits toxic fumes under fire conditions. Container may explode under fire conditions.			Avoid heat, sparks, flames.			Water spray, Dry chemical, foam, or carbon dioxide.		
Inhalation		Highly Toxic. Toxic by inhalation.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Toxic if in contact with skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		Toxic if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water provided person is conscious. Call a physician.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

2-(2,4-Dimethylbenzoyl)benzoic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
577-56-0	powder	white	odorless	N/A	N/A	116–118	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.*			Avoid heat, sparks, flames.			Water spray, dry chemical, foam, or carbon dioxide.		
Inhalation		May be harmful if inhaled.*			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		May irritate the skin.*			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		May irritate the eyes.*			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.*			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.*			Mutagenicity			Not a known mutagen.		

* Toxicological information for the listed chemical is *not* available. Information given pertains to **2-acetylbenzoic acid** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

N,N-Dimethylformamide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
68-12-2	liquid	colorless	pungent, fishy	58	153	-61	0.94	2.7 torr @ 20	2.5	miscible
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Gives off irritating or toxic fumes (or gases) in a fire.			No flames, no sparks, no contact with hot surfaces. No contact with oxidizing agents.			Powder, alcohol-resistant foam, water spray, carbon dioxide.		
Inhalation		Abdominal pain. Diarrhea. Nausea. Vomiting. Nervous agitation. Facial flushing. Alcohol intolerance.			Ventilation, local exhaust., or breathing protection.			Fresh air, rest. Artificial respiration if indicated. Refer for medical attention.		
Skin		MAY BE ABSORBED! Dry skin. Redness. Roughness.			Protective gloves and clothing.			Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.		
Eyes		Redness. Pain.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if easily possible; seek medical attention.		
Ingestion		Abdominal pain. Diarrhea. Nausea. Vomiting. Nervous agitation. Facial flushing. Alcohol intolerance.			Do not eat or drink in the laboratory.			Rinse mouth. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4,4-Dimethyl-2-cyclohexen-1-one

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1073-13-8	liquid	colorless	N/A	64	72–73.5	N/A	0.944	N/A	N/A	poorly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Moderate fire hazard.			No flames, no sparks, no contact with hot surfaces.		Carbon dioxide, regular chemical powder, foam, water			
Inhalation		May be harmful			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation, may be harmful if absorbed through skin			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		May be harmful			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2,6-Dimethylnitrobenzene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
81-20-9	liquid	light yellow	N/A	87	225	14–16	1.112	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible liquid. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Highly toxic if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Toxic if absorbed through skin. Causes skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Harmful to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be fatal if swallowed.			Do <i>not</i> eat, drink, or smoke during work.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

1,3-Dinitrobenzene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
99-65-0	powder	orange	N/A	N/A	297	88–90	1.368	N/A	N/A	0.808 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		May be shock sensitive. Emits toxic fumes under fire conditions. Capable of creating a dust explosion. May explode when heated.			No open flames or sparks.			Water spray, Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Highly Toxic by inhalation, danger of cumulative effect, risk of irreversible effects.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May be fatal if absorbed through skin. Causes cyanosis, which may be delayed 2–4 hours.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Causes eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

3,5-Dinitrobenzoic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
99-34-3	solid	white	N/A	N/A	N/A	205–207	N/A	N/A	N/A	0.1–1.0%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			Avoid heat, flames, sparks		Regular dry chemical, carbon dioxide, water, regular foam			
Inhalation		Irritation			Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.			
Skin		Irritation			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.			
Ingestion		N/A			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips, get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

3,5-Dinitrobenzoyl Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
99-33-2	solid	yellow	pungent	N/A	196	69–71	1.33	9–12 @ 196	7.6– 8.0	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, regular foam.		
Inhalation		Spasm, inflammation, and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention immediately.		
Skin		Corrosive			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Corrosive			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, get medical attention immediately, continue washing with water.		
Ingestion		Corrosive			Do not eat or drink in the laboratory.			Contact physician immediately; give large amounts of water or milk, allow vomiting to occur; when vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2,4-Dinitrophenylhydrazine

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
119-26-6	solid	orange	N/A	209	N/A	N/A	N/A	N/A	N/A	0.1-1%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard., severe explosion hazard.			Avoid friction, shock, and heat			Flood with water, if no water is available use dry chemical or earth.		
Inhalation		Irritation, cyanosis, nausea, central nervous system effects with tremors, excitability, and convulsions.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Irritation, skin absorption may occur. Sensitization dermatitis may occur in previously exposed persons. If sufficient amounts are absorbed, systemic toxicity may occur as detailed in acute inhalation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation .			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.		
Ingestion		Systemic toxicity may occur as detailed in acute inhalation.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1,4-Dioxane

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
123-91-1	liquid	colorless	sweet	12	100–102	11.8	1.034	40	3	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable, may form explosive peroxides.			Avoid heat, sparks, flames.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful to respiratory system			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.		
Skin		Irritant to skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Irritant to eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water, lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Harmful if swallowed. Symptoms include nausea, vomiting, anorexia, weakness, dizziness, vertigo, headache and sweating.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Probable carcinogen			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Diphenyl Ether

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
101-84-8	solid	colorless	unpleasant	115	259	26–30	1.073	0.0213 @ 20	5.8	0.0021%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			Avoid heat, sparks, flames.		Regular dry chemical, carbon dioxide. Water or foam may cause frothing.			
Inhalation		Irritation, nausea.			Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.			
Skin		Irritation.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Nausea, vomiting, sore throat, abdominal pain, and diarrhea .			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Diphenylacetylene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
501-65-5	solid	white	N/A	N/A	170 @ 19	59–61	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Moderate fire hazard.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.		Carbon dioxide, regular chemical powder, foam, water.			
Inhalation		May be harmful.			Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.			
Skin		Irritation, may be harmful if absorbed through skin.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		May be harmful.			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Disodium Hydrogen Phosphate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7558-79-4	granular solid	colorless	odorless	N/A	N/A	48.1	1.7	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Not considered to be a fire hazard.			N/A			Use any means suitable for extinguishing surrounding fire.		
Inhalation		May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.			Ventilation, local exhaust., or breathing protection.			Remove to fresh air. Get medical attention for any breathing difficulty.		
Skin		May cause irritation with redness and pain.			Protective gloves and clothing.			Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops.		
Eyes		May cause irritation, redness and pain.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.		
Ingestion		Symptoms may include vomiting, lethargy, diarrhea, blood chemistry effects, heart disturbances and central nervous system effects.			Do <i>not</i> eat or drink in the laboratory.			Give large amounts of water to drink. Get medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Dry Ice										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
124-38-9	solid	white	none	none	-79	-78.5	1.56 @ -79	569 @ -82	1.52	1.6%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire		
Inhalation		Acidic taste, headache, vertigo, nausea, labored breathing, weakness, drowsiness, mental confusion, increase in blood pressure, pulse, and respiratory rate, visual disturbances, profuse perspiration, general feeling of discomfort, and loss of consciousness.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Frostbite with redness, tingling, pain, numbness, hard and white skin, and blisters.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, warm affected areas with warm water, and get medical help if needed.		
Eyes		Stinging, frostbite, redness, pain, and blurred vision.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, continue to wash eyes with water until medical help arrives.		
Ingestion		Frostbite.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Ethanol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
64-17-5	liquid	colorless	alcoholic	13	78	N/A	0.7893	40 torr @ 19	1.59	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water		
Inhalation		Irritation, central nervous system depression with headache, stupor, fatigue, dizziness, drowsiness, dullness, lassitude, and loss of appetite may occur.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Redness, burning, contact dermatitis, skin absorption may occur.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Immediate burning, stinging, reflex closure of the lids, tearing, and temporary injury of the corneal epithelium.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Emotional lability, decreased inhibitions, exhilaration, boastfulness, belligerency, visual impairment, muscular incoordination, sensory disturbances, dilated pupils, rapid pulse, nausea, vomiting, sweating, drowsiness, and stupor.			Do not eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Ethyl Acetate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
141-78-6	liquid	colorless	fruity	-3	76.5–77.5	-84	0.902	73 @ 20	3	8.7%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water		
Inhalation		Irritation, headache, coughing, dizziness, drowsiness, shortness of breath, narcotic effects, and unconsciousness.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, redness, and defatting action on the skin.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, redness, pain, and lacrimation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Sore throat, abdominal pain, diarrhea, central nervous system depression, dizziness, headache, fatigue, drowsiness, and unconsciousness.			Do not eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Ethyl 4-Aminobenzoate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
94-09-7	solid	white	odorless	N/A	N/A	88-90	1.11	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Noncombustible. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water provided person is conscious .Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Ethylbenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
100-41-4	liquid	colorless	distinct	22	136	N/A	0.8670	7.1 @ 20	3.7	0.015%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		SEVERE fire hazard., vapors or gases may ignite at distant ignition sources.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Regular dry chemical, carbon dioxide, water for cooling, regular foam.		
Inhalation		Severe irritation, cough, fatigue, depression, dizziness, and headache.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention immediately.		
Skin		Irritation, inflammation, 1st or 2nd degree burns; absorption through skin may cause systemic toxicity.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Irritation and lacrimation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Abdominal pain, nausea, vomiting, aspiration with extensive edema and hemorrhage of lung tissue.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hip.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Ferric Chloride										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
10025-77-1	solid	yellow	unpleasant	N/A	280–285	37	1.82	1	N/A	91.9% @ 20
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Severe respiratory tract irritation, sore throat, cough, and labored breathing.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention immediately.		
Skin		Severe irritation, pain, and burns.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Redness, pain, blurred vision, lacrimation, corneal injury and burns.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, continue to wash eyes with water until medical help arrives.		
Ingestion		Abdominal pain, prolonged vomiting, watery and then tarry diarrhea, intense dehydration, shock, cyanosis, rapid respiration, drowsiness, and dilated pupils.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Ferrous Ammonium Sulfate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
10045-89-3	crystals	pale blue-green	odorless	N/A	N/A	110-112	1.86	N/A	>1	26.9 g/100 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Not considered to be a fire hazard.		No open flames or sparks.		Use extinguishing agents appropriate for surrounding fire.				
Inhalation		Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.		Ventilation, local exhaust.		Remove to fresh air. Get medical attention.				
Skin		Causes irritation to skin. Symptoms include redness, itching, and pain.		Protective gloves and clothing.		Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention.				
Eyes		Causes irritation, redness, and pain.		Safety goggles..		Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.				
Ingestion		Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Low toxicity in small quantities but larger dosages may cause nausea, vomiting, diarrhea, and black stool. Pink urine discoloration is a strong indicator of iron poisoning.		Do <i>not</i> eat or drink in the laboratory.		Induce vomiting immediately as directed by medical personnel. Get medical attention.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Fluorene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
86-73-7	solid	colorless to white	N/A	N/A	298	114–116	1.202	10 @ 146	N/A	0.2 ppm
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		Irritation.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.		
Ingestion		Irritation.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

9-Fluorenone

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
486-25-9	solid	yellow	N/A	163	342	80–83	1.13	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, regular chemical powder, foam, water.		
Inhalation		May be harmful.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, tumors, and may be harmful if absorbed through skin.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		May be harmful.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Fluorescein										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
2321-07-5	powder	orange-brown	N/A	N/A	N/A	320	N/A	N/A	N/A	0.05g/100g
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions			No open flames or sparks.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		May cause eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Formic Acid										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
64-18-6	liquid	colorless	pungent	69	100.8	8.5	1.2	23 @ 20	1.6	miscible
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Regular dry chemical, carbon dioxide, regular foam, alcohol resistant foam.		
Inhalation		Irritation, throat discomfort, lightheadedness, nausea, cough, rhinitis, nasal discharge, corrosion, dyspnea, bronchitis, pulmonary edema, shock, and death.			Ventilation, local exhaust.			Remove from exposure immediately, keep warm and at rest, get medical attention immediately.		
Skin		Irritation, redness, pain, corrosion, subsequent dermatitis, second degree burns, blistering, vesiculation, keloid formation, and absorbed through the skin producing severe toxic effects.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.		
Eyes		Irritation, lacrimation, acute inflammation of the eyes, conjunctivitis, keratitis, pain, redness, blurred vision, burns, tissue damage, and permanent corneal scarring.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water until medical help arrives.		
Ingestion		Burning sensation in the mouth, salivation, corrosion of the glottis, esophagus, and stomach, abdominal pain, nausea, diarrhea, and difficulty breathing.			Do <i>not</i> eat or drink in the laboratory.			Contact a physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

D-Fructose

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
57-48-7	solid	colorless	odorless	N/A	N/A	119–122	1.60	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.			No open flames or sparks.			Water spray, Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		May cause eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

2-Furaldehyde

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
98-01-1	liquid	light yellow	N/A	58	162	-36	1.160	1.7	3.31	77.833 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Combustible liquid. Emits toxic fumes under fire conditions.		Avoid heat, sparks, flames.		Carbon dioxide, dry chemical powder or appropriate foam.				
Inhalation		Toxic by inhalation. Do <i>not</i> breathe vapor. May cause sensitization by inhalation. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache nausea and vomiting. May cause nervous system disturbances.		Ventilation, local exhaust.		Remove to fresh air. If breathing is difficult, give oxygen. Seek medical attention.				
Skin		Toxic in contact with skin. Causes burns and may cause sensitization with contact. May cause allergic reactions and photosensitivity.		Protective gloves and clothing.		Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.				
Eyes		Irritant and causes burns.		Safety goggles.		Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.				
Ingestion		Toxic if swallowed. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache nausea and vomiting. May cause nervous system disturbances.		Do <i>not</i> eat or drink in the laboratory.		If swallowed wash out mouth with water. Call a physician.				
Carcinogenicity		Possible carcinogen				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

2-Furaldehyde Semicarbazone

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
2411-74-7	solid	off-white	odorless	N/A	N/A	202	N/A	N/A	N/A	poorly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable, emits toxic fumes under fire conditions.*			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled.*			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		May be irritating to the skin.*			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Dust, vapor, or mist may be irritating to the eyes.*			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.*			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.*			Mutagenicity			Not a known mutagen.*		

* Toxicological information for the listed chemical is *not* available. Information given pertains to **acetone semicarbazone** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

D-Glucose										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
50-99-7	crystals or powder	colorless or white	odorless	N/A	N/A	83	1.56	N/A	N/A	1 g/1.1 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Not considered to be a fire hazard.			No open flames or sparks.			Use any means suitable for extinguishing surrounding fire.		
Inhalation		No adverse health effects expected from inhalation.			Ventilation, local exhaust., or breathing protection.			Not expected to require first aid measures.		
Skin		Not expected to be a health hazard from skin exposure.			Protective gloves and clothing.			Not expected to require first aid measures.		
Eyes		No adverse effects expected but dust may cause mechanical irritation.			Safety goggles.			Wash thoroughly with running water. Get medical advice if irritation develops.		
Ingestion		Extremely large oral dosages may produce gastrointestinal disturbances.			Do <i>not</i> eat or drink in the laboratory.			Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

tris-[3-(Heptafluoropropylhydroxymethylene)-(+)-camphorato]europium

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
34788-82-4	solid	yellow	N/A	N/A	N/A	156–158	N/A	N/A	N/A	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		May irritate skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist may be harmful to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Heptane										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
142-82-5	liquid	colorless	mild, gasoline-like	-4	91	-91	0.697	40 torr @ 20	3.5	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard			No flames, no sparks, no contact with hot surfaces.			Powder, AFFF, foam, carbon dioxide. NO water.		
Inhalation		Dullness. Headache.			Ventilation, local exhaust.			Fresh air, rest. Refer for medical attention.		
Skin		Dry skin.			Protective gloves and clothing.			Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention. Wear protective gloves and clothing. when administering first aid.		
Eyes		Redness. Pain.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if easily possible; seek medical attention.		
Ingestion		Abdominal cramps. Burning sensation. Nausea. Vomiting.			Do not eat or drink in the laboratory.			Rinse mouth. Do not induce vomiting. Rest. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Hexane										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
110-54-3, 107-83-5	liquid	colorless	hydrocarbon-like	-7	69	-95	0.660	125	3	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard; vapor may travel considerable distance to ignition source and flash back.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Toxic by inhalation. Vapor is irritating to the upper respiratory track. Symptoms may include headache, dizziness, and nausea.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		May causes eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water, lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Toxic by ingestion. Symptoms may include headache, dizziness and nausea.			Do not eat or drink in the laboratory.			If swallowed, wash out mouth with water.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

1,6-Hexanediamine

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
6055-52-3	solid	colorless	fishy	N/A	204–205	41–42	N/A	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, flames, and sparks			Regular dry chemical, carbon dioxide, water, regular foam		
Inhalation		Irritation			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention		
Skin		Irritation			Protective gloves and clothing.			Remove contaminated clothes and jewelry; thoroughly wash skin with water.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Not available			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1-Hexene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
592-41-6	liquid	colorless	faint, pleasant	-26	63	-140	0.67	310 torr @ 20	3.0	negligible
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard.			No flames, no sparks, no contact with hot surfaces.			Powder, AFFF, foam, carbon dioxide.		
Inhalation		Cough. Dizziness. Drowsiness. Sore throat. Unconsciousness. Vomiting.			Ventilation, local exhaust.			Fresh air, rest. Refer for medical attention.		
Skin		Dry skin. Redness.			Protective gloves and clothing..			Remove contaminated clothes. Rinse and then wash skin with water or shower. Refer for medical attention.		
Eyes		Redness.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if possible; seek medical attention.		
Ingestion		Cough. Dizziness. Drowsiness. Sore throat. Unconsciousness. Vomiting.			Do not eat or drink in the laboratory.			Rinse mouth. Do not induce vomiting. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Hydrobromic Acid, Concentrated										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
10035-10-6	liquid	colorless to yellow	irritating	N/A	74 @ 100 torr	N/A	1.5	N/A	2.8	miscible
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Irritation, coughing, choking, burns of the mucous membranes, headache, nausea, pulmonary edema, tightness in the chest, dizziness, and weak, rapid pulse.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention immediately.		
Skin		Severe pain, burns, and brownish or yellowish stains			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Pain, lacrimation, photophobia, burns, and blindness			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention, and continue to wash eyes with water until medical help arrives.		
Ingestion		Immediate pain, difficulty or inability to swallow or speak, respiratory distress, thirst, nausea, vomiting, diarrhea, weak, rapid pulse, and shallow respiration.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Hydrochloric Acid Solutions (9-37%)										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7647-01-0 (Hydrogen Chloride)	liquid	colorless or yellow	irritating	N/A	65.5–110	N/A	1.07–1.18	30 @ 20	1.3	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Burning of the throat, coughing, choking, inflammation, ulceration of the nose, throat or larynx, bronchitis, pneumonia, palpitations, and headache.			Ventilation, local exhaust.			Remove from exposure immediately; keep warm and at rest, get medical attention immediately.		
Skin		Severe irritation, inflammation, ulceration, necrosis, chemical burns, shock, rapid pulse, sweating, and collapse.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Severe irritation, conjunctivitis, corneal necrosis, and burns with impairment or permanent loss of vision.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention, continue to wash eyes with water.		
Ingestion		Burns of the mouth, throat, esophagus and stomach, pain, uneasiness, nausea, salivation, vomiting, diarrhea, chills, shock and intense thirst.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Hydrogen Peroxide (30%)										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7722-84-1	liquid	colorless	pungent	N/A	126	-40	1.11	23.3 @ 20	1	100%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.; may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials			Water		
Inhalation		Irritation, sore throat, coughing, shortness of breath, systemic poisoning, headache, dizziness, vomiting, diarrhea, and numbness.			Ventilation, local exhaust.			Remove from exposure immediately; keep warm and at rest; get medical attention immediately.		
Skin		Irritation, tingling and whitening of the skin, erythema or vesicle formation, severe burns, ulceration.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.		
Eyes		Redness, stinging, tearing, blurred vision, severe corneal or conjunctival ulceration, blindness.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, continue to wash eyes with water until medical help arrives.		
Ingestion		Irritation and injury to the mouth and throat, distention of the esophagus and stomach, and stomach and chest pains.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Hydroxylamine Hydrochloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
5470-11-1	crystals	colorless	odorless	N/A	N/A	152	1.67	N/A	N/A	83 g/100 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Blue lips or fingernails. Blue skin. Headache. Dizziness. Nausea. Confusion. Convulsions. Unconsciousness.			Ventilation, local exhaust., or breathing protection.			Remove from exposure immediately; keep warm and at rest; get medical attention immediately.		
Skin		Redness. Pain.			Protective gloves and clothing.			Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.		
Eyes		Redness. Pain.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if easily possible; seek medical attention.		
Ingestion		Blue lips or finger nails. Blue skin. Headache. Dizziness. Nausea. Confusion. Convulsions. Unconsciousness.			Do <i>not</i> eat or drink in the laboratory.			Rinse mouth. Give a slurry of activated charcoal in water to drink. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Iodine										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7553-56-2	solid	purple to black	pungent	N/A	184.4	113.5	4.93	0.305 @ 25	8.8	0.03% @ 20
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Severe irritation of the mucous membranes, severe cough, headache, and feeling of tightness in the chest.			Ventilation, local exhaust.			Remove from exposure immediately; keep warm and at rest; get medical attention immediately.		
Skin		Brown discoloration of the skin with marked erythema, desquamation, and vesiculation with weeping and crusting.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical help immediately.		
Eyes		Burning sensation, irritation, and lacrimation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, continue to wash eyes with water until medical help arrives.		
Ingestion		Inflammation and corrosion of the gastrointestinal tract, brown discoloration of the lips and mucous membranes, a burning sensation, nausea, severe vomiting, diarrhea, intense thirst, metallic taste, fever, delirium, and stupor.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give milk then starch solution; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Iodine Monochloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7790-99-0	solid	red	pungent	N/A	N/A	27.2	3.240	N/A	N/A	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard.			N/A		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Sore throat, coughing, labored breathing, fatigue, respiratory irritation, and pulmonary edema.			Ventilation, local exhaust.		Remove from exposure immediately; keep warm and at rest; get medical attention immediately.			
Skin		Irritation and burns.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.			
Eyes		Potent lacrimator, burning, and corneal injury.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Sore throat, labored breathing, gastrointestinal irritation, abdominal pain, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Isobutylbenzene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
538-93-2	liquid	colorless	mild aromatic	54	173	-51	0.853	4.22	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible and flammable.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Water spray, Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Causes eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

(-)-Isopinocampheol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
25465-65-0	solid	white	N/A	93	219	52–55	N/A	N/A	N/A	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, flames, sparks			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		Irritation.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		N/A			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Isopropylbenzene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
98-82-8	liquid	colorless	aromatic	31	152.4	-962	0.862	3.2 @ 20	4.2	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Highly flammable.			No flames, no sparks, no contact with hot surfaces.			Powder, AFFF, foam, carbon dioxide.		
Inhalation		Ataxia. Cough. Dizziness. Drowsiness. Headache. Sore throat. Unconsciousness.			Ventilation, local exhaust.			Fresh air, rest. Half-upright position. Refer for medical attention.		
Skin		Dry skin			Protective gloves and clothing.			Remove contaminated clothes. Rinse and then wash skin with water and soap.		
Eyes		Redness. Pain			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if possible; seek medical attention.		
Ingestion		Ataxia. Cough. Dizziness. Drowsiness. Headache. Sore throat. Unconsciousness.			Do <i>not</i> eat or drink in the laboratory.			Rinse mouth. Do <i>not</i> induce vomiting. Refer for medical attention.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Isopropylxylenes

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
N/A	liquid	colorless	mild aromatic	N/A	193–216	N/A	0.85	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible liquid.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Dry chemical, foam, or carbon dioxide.		
Inhalation		May be harmful if inhaled. Irritating to respiratory system. Prolonged exposure can cause nausea, headache, and vomiting.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin. May cause drying, cracking and redness.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Irritating to the eyes. May cause redness and stinging.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed. May cause irritation to the gastrointestinal tract.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Lead Acetate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
301-04-2	solid	white	pungent	N/A	N/A	280	3.25	N/A	N/A	44.3%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Metallic taste, thirst, a burning sensation in the mouth and throat, excessive salivation, abdominal pain, vomiting, fatigue, sleep disturbances, dullness.			Ventilation, local exhaust.			Remove from exposure immediately, keep warm and at rest, get medical attention immediately.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Symptoms as described in inhalation.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. If vomiting occurs, keep head lower than hips. Get medical attention.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Magnesium

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7439-95-4	solid	white	odorless	N/A	1107	649	1.7 @ 5	1 @ 621	N/A	reacts
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Severe fire hazard.		No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, sand, lime, soda ash.				
Inhalation		Burning sensation, coughing, wheezing, laryngitis, headache.		Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.				
Skin		Severe local lesions if particles perforate the skin or gain access through cuts.		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Formation of hydrogen bubbles.		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.				
Ingestion		Gastrointestinal irritation, nausea, vomiting, chills, fever, muscle and joint pain, anorexia, abdominal pain, and diarrhea.		Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Maleic Anhydride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-31-6	solid	colorless	irritating	103	200	54–56	1.314 @ 60	1 @ 44	3.4	reacts
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Alcohol resistant foam, carbon dioxide.		
Inhalation		Irritation; fumes cause: burning sensation in the throat, coughing, and vomiting.			Ventilation, local exhaust.			Remove from exposure immediately; keep warm and at rest, get medical attention immediately.		
Skin		Irritation, inflammation, blistering, burns, and possibly absorbed through skin.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.		
Eyes		Irritation, severe burns; fumes cause conjunctivitis, corneal damage or edema, photophobia, double vision, and lacrimation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water until medical help arrives.		
Ingestion		Corrosion, sore throat, abdominal pain, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Mercuric Oxide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
21908-53-2	powder	orange-red or orange-yellow	odorless	N/A	N/A	500	11.14	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Upon heating it decomposes to form oxygen, which increases the flammability of combustibles.			No open flames or sparks.			Use any means suitable for extinguishing surrounding fire.		
Inhalation		Causes irritation to the respiratory tract. Symptoms include sore throat, coughing, pain, tightness in chest, breathing difficulties, shortness of breath and headache. Pneumonitis may develop. Can be absorbed through inhalation with symptoms to parallel ingestion.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.		
Skin		Causes irritation. Symptoms include redness and pain. May cause burns. May cause sensitization. Can be absorbed through the skin with symptoms to parallel ingestion.			Protective gloves and clothing.			Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.		
Eyes		Causes irritation and burns to eyes. Symptoms include redness, pain, blurred vision; may cause serious and permanent eye damage.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.		
Ingestion		Highly toxic! Average lethal dose for inorganic mercury salts is about 1 gram. May cause burning of the mouth and pharynx, abdominal pain, vomiting, corrosive ulceration, bloody diarrhea.			Do <i>not</i> eat or drink in the laboratory.			Induce vomiting immediately as directed by medical personnel. Get medical attention immediately.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Methanol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
67-56-1	liquid	colorless	alcohol-like	11	64.6–64.7	-98	0.7914	97.25 @ 20	1.11	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water.		
Inhalation		Irritation, coughing, unsteady gait, twitching, constipation, numbness and shooting pains in the hands and forearms.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, skin absorption may lead to metabolic acidosis and effects on the eyes and central nervous system given in acute ingestion.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, violent inflammation of the conjunctiva, and epithelial defects on the cornea.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Inebriation, drowsiness, coughing, headache, dullness, weakness, vertigo, dizziness, nausea, vomiting, occasional diarrhea, and blindness.			Do not eat or drink in the laboratory.			If vomiting occurs keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Methyl Acetoacetate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
105-45-3	liquid	colorless	sweet	69	169–170	-80	1.076	N/A	4	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible liquid.			Avoid heat, sparks, flames.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Can cause blindness.			Safety goggles.			Immediately flush eyes with copious amounts of water, lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Methyl Benzoate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
93-58-3	liquid	colorless	fruity	82	198–199	-12	1.094	1 @ 39	4.68	0.016%
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.		No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, carbon dioxide, water, regular foam.				
Inhalation		Irritation, sore throat, and coughing.		Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.				
Skin		Irritation.		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Redness, pain, and irritation.		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.				
Ingestion		Abdominal pain, vomiting, diarrhea, and depression.		Do not eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Methyl Iodide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
74-88-4	liquid	colorless	acrid	N/A	42	-66.1	2.28	400 @ 25	4.9	14 g/100 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Not considered to be a fire hazard. Fire may produce poisonous or irritating gases.			No open flames or sparks.			Dry chemical, foam, carbon dioxide, or water spray.		
Inhalation		Inhalation of vapors can irritate the respiratory tract. Overexposure may produce symptoms of vertigo, delirium and mental disturbances. Other symptoms may include slurred speech, drowsiness, coughing, nausea and vomiting.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.		
Skin		Causes irritation, rash and blister formation. Prolonged contact can cause skin burns. Can be absorbed through skin with toxic effects.			Protective gloves and clothing.			Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, immediately.		
Eyes		Vapors can cause irritation. Splashes may cause severe irritation with eye damage.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.		
Ingestion		Ingestion may damage the gastrointestinal tract. Severe intoxication can occur with symptoms of central nervous system depression.			Do <i>not</i> eat or drink in the laboratory.			Induce vomiting immediately as directed by medical personnel. Get medical attention immediately.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Methyl Isobutyrate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
547-63-7	liquid	colorless	fruity	3	90	N/A	0.891	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable liquid.			Avoid heat, sparks, flames.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful by inhalation.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		May cause eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water, lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

3-Methylbenzoic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
99-94-5	solid	white	odorless	N/A	274–275	180–182	1.27	N/A	N/A	0.33 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritant.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist may be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

(+/-)- α -Methylbenzylamine

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
618-36-0	liquid	colorless	N/A	79	185 @ 756 torr	-65	0.940	N/A	N/A	poorly soluble

Types of Hazard/Exposure	Acute Hazards/Symptoms	Prevention	First Aid/Fire
Fire	Emits toxic fumes under fire conditions.	Avoid heat, sparks, flames.	Water spray, carbon dioxide, dry chemical powder or appropriate foam.
Inhalation	Extremely destructive to tissue of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache nausea and vomiting.	Ventilation, local exhaust.	Remove to fresh air. If breathing is difficult, give oxygen.
Skin	Harmful if absorbed through skin. Extremely destructive to tissue of skin. Causes burns.	Protective gloves and clothing.	Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.
Eyes	Harmful to the eyes.	Safety goggles.	Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.
Ingestion	Harmful if swallowed. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache nausea and vomiting.	Do <i>not</i> eat or drink in the laboratory.	If swallowed wash out mouth with water. Call a physician.

Carcinogenicity	Not a known carcinogen.	Mutagenicity	Not a known mutagen.
------------------------	-------------------------	---------------------	----------------------

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Methylcyclohexane										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-87-2	liquid	colorless	sweet	-3	101	-126– -126.3	0.77	37 @ 20	3.4	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard., moderate explosion hazard, vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, carbon dioxide, water for cooling, regular foam.		
Inhalation		Irritation, light-headedness, drowsiness, lacrimation, salivation, labored breathing, diarrhea, and liver and kidney damage.			Ventilation, local exhaust.			Remove from exposure immediately, keep warm and at rest, get medical attention immediately.		
Skin		Irritation, hardening, ulceration, and defatting.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention.		
Eyes		Conjunctival congestion.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Irritation, lethargy, severe diarrhea, liver and kidney damage, and circulatory collapse.			Do not eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Methylpropanal

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
78-84-2	liquid	colorless	pungent	-25	63–64	-65	0.7938	66 @ 25	2.5	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.		No flames, no sparks, no contact with hot surfaces.		Alcohol resistant foam, carbon dioxide, regular dry chemical, water				
Inhalation		Irritation, central nervous system depression, and symptoms similar to alcohol intoxication.		Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.				
Skin		Irritation, burns, lethal amounts may be absorbed through skin.		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Lacrimation, irritation, burns.		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.				
Ingestion		Central nervous system depression and symptoms similar to alcohol intoxication.		Do not eat or drink in the laboratory.		Contact physician immediately. If vomiting occurs, keep head lower than hips; get medical attention immediately.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Methyltrioctylammonium Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
5137-55-3	viscous liquid	colorless to pale orange	N/A	109	N/A	N/A	0.884	N/A	N/A	partially soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful by inhalation. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Ventilation, local exhaust			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		Harmful if absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Causes eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		Harmful if swallowed. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Methyl-2-butanol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
75-85-4	liquid	colorless	distinct	21	102	-12	0.805	10 @ 17.2	3.0	slightly soluble

Types of Hazard/Exposure	Acute Hazards/Symptoms	Prevention	First Aid/Fire
Fire	SEVERE fire hazard. Vapors or gases may ignite at distant ignition sources.	No flames, no sparks, no contact with hot surfaces.	Alcohol resistant foam, carbon dioxide, regular dry chemical, water for cooling
Inhalation	Headache, dizziness, nausea, vomiting, diarrhea, coughing, shortness of breath, excitement and delirium.	Ventilation, local exhaust.	Remove from exposure immediately, keep warm and at rest, artificial respiration if needed; get medical attention.
Skin	Irritation. May be absorbed through the skin, causing headache, dizziness, nausea, vomiting, flushing, rapid pulse and respiration, drop in blood pressure, and unconsciousness.	Protective gloves and clothing.	Remove contaminated clothes and jewelry, thoroughly wash skin with water.
Eyes	Conjunctivitis, double vision and irritation. May be absorbed, causing headache, dizziness, cough, shortness of breath, vomiting, excitement and delirium.	Safety goggles.	Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.
Ingestion	Nausea, vomiting, diarrhea, headache, shortness of breath, cough, dizziness, excitement and delirium followed by coma.	Do <i>not</i> eat or drink in the laboratory.	Contact physician immediately. If vomiting occurs, keep head lower than hips; get medical attention immediately.
Carcinogenicity	Not a known carcinogen.	Mutagenicity	Not a known mutagen.

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Methyl-1-butene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
563-46-2	liquid	colorless	unpleasant	<-7	31-32	N/A	0.6504	N/A	2.4	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		SEVERE fire hazard. Vapors or gases may ignite at distant ignition sources.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Alcohol resistant foam, carbon dioxide, regular dry chemical, water for cooling		
Inhalation		Irritation, central nervous system depression, asphyxia			Ventilation, local exhaust.			Remove from exposure immediately, keep warm and at rest, artificial respiration if needed; get medical attention immediately.		
Skin		Irritation			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Irritation to the gastrointestinal tract; aspiration into the lungs may cause death due to chemical pneumonitis.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. If vomiting occurs, keep head lower than hips;		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Methyl-2-butene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
513-35-9	liquid	colorless	unpleasant	-20	37–38	-134	0.663	N/A	2.4	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		SEVERE fire hazard. Vapors or gases may ignite at distant ignition sources			No flames, no sparks, no contact with hot surfaces.		Alcohol resistant foam, carbon dioxide, regular dry chemical, water for cooling.			
Inhalation		Irritation, central nervous system depression with dizziness, disorientation, headache, vomiting and nausea; respiratory and cardiac depression, burning sensation.			Ventilation, local exhaust.		Remove from exposure immediately, keep warm and at rest; get medical attention immediately.			
Skin		Erythema			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Diarrhea and central nervous system depression with labored breathing and respiratory failure. Aspiration may result in chemical pneumonitis.			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Methyl-3-butyn-2-ol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
115-19-5	liquid	colorless	N/A	25	104	2.6	0.868	N/A	N/A	miscible
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Flammable liquid and vapor.		No flames, no sparks, no contact with hot surfaces.		Carbon dioxide or dry chemical powder. Do not use water.				
Inhalation		Causes irritation to respiratory tract and mucous membranes.		Ventilation, local exhaust.		Remove to fresh air.				
Skin		Can irritate skin.		Protective gloves and clothing.		Flush with water. Use soap if no burns have occurred.				
Eyes		Can irritate eyes.		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.				
Ingestion		Causes irritation to mucous membranes.		Do not eat or drink in the laboratory.		Requires antidote. Contact a physician.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Methyl-3-heptanol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
14979-39-6	liquid	colorless	N/A	54	98–99 @ 75 torr	N/A	0.827	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible. Flammable.*			Avoid heat, sparks, flames.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled. Irritating to respiratory system.*			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.*			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Irritating to the eyes.*			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.*			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

* Toxicological information for the listed chemical is *not* available. Information given pertains to **4-methyl-3-heptanol** and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

4-Methyl-2-pentanol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-11-2	liquid	colorless	sweet	41	132	-90	0.802	2.8 @ 20	3.53	1.7% @ 20
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.; vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, carbon dioxide, regular foam, alcohol resistant foam		
Inhalation		Irritation, sore throat, coughing, headache, shortness of breath, and central nervous system depression with weakness, nausea, vomiting and fatigue.			Ventilation, local exhaust.			Remove from exposure immediately; get immediate medical attention.		
Skin		Irritation with redness and pain, absorbed through the skin and may cause central nervous system depression with weakness, dizziness, drowsiness, nausea, vomiting and fatigue.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Redness, pain, and blurred vision.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Abdominal pain, vomiting, diarrhea, and central nervous system depression.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips, get immediate medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Methyl-1-pentene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
763-29-1	liquid	colorless	N/A	-9	62	-136	0.682	325 @ 37.7	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Severe fire hazard.			No flames, no sparks, no contact with hot surfaces.		Carbon dioxide, regular chemical powder, foam, water for cooling.			
Inhalation		May be harmful.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation, may be harmful if absorbed through skin.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		May be harmful.			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Methyl-1-pentene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
691-37-2	liquid	colorless	N/A	-7	53–54	N/A	0.6642	424 @ 38	2.9	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Severe fire hazard.			No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, carbon dioxide, water for cooling, regular foam			
Inhalation		Irritation and may cause central nervous system depression with vomiting, dyspnea, cyanosis, vertigo, incoordination, and loss of consciousness.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.			
Ingestion		No specific data available; central nervous system depression may occur.			Do not eat or drink in the laboratory.		Get medical attention immediately.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

4-Methyl-2-pentene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
4461-48-7	liquid	N/A	N/A	<-7	56-59	N/A	0.669	N/A	2.90	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		Irritation, possible narcotic and may cause central nervous system depression with vomiting, dyspnea, cyanosis, vertigo, incoordination, loss of consciousness, and even death at high concentrations.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several minutes, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		No specific data available; central nervous system depression may occur.			Do not eat or drink in the laboratory.			Get medical attention immediately		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Methyl-1-propanol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
78-83-1	liquid	clear	sweet and musty	28	108	-108	0.803	8.8 @ 20	2.6	9.5 g/100 mL water
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Flammable liquid and vapor		No flames, no sparks, no contact with hot surfaces.		Dry chemical, foam or carbon dioxide.				
Inhalation		Causes irritation to respiratory tract. Effects from overexposure include headache, dizziness, muscle weakness, drowsiness, incoordination, confusion, and coma.		Ventilation, local exhaust.		Remove to fresh air. If breathing is difficult, give oxygen. Call a physician.				
Skin		Skin contact causes irritation, redness, and pain. May be absorbed through the skin; symptoms of absorption may be similar to those from ingestion.		Protective gloves and clothing.		Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists.				
Eyes		Vapors cause irritation, redness, and blurred vision. Splashes may cause severe irritation or eye damage.		Safety goggles.		Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.				
Ingestion		Ingestion may cause nausea, vomiting, and diarrhea.		Do not eat or drink in the laboratory.		Induce vomiting immediately as directed by medical personnel.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Methyl-2-propanol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
75-65-0	liquid	colorless	N/A	11	83	25–26	0.775	44	2.5	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be irritating if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Toxic, harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Naphthalene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
91-20-3	N/A	N/A	mothball-like	N/A	218	80.5	0.963	N/A	4.4	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Severe fire hazard.; explosion possible.			No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, sand, earth, regular foam, water			
Inhalation		Irritation, headache, nausea, vomiting, abdominal cramps, diarrhea, edema, perspiration, and confusion.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation and severe dermatitis.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation, conjunctivitis, injury to the cornea, cataracts, and diminished visual acuity.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Abdominal cramps, nausea, vomiting, diarrhea, headache, profuse perspiration, bladder irritation, hemolytic anemia, hemoglobinuria, convulsions, liver injury with jaundice and acute renal failure.			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention immediately.			
Carcinogenicity		Possible carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Naphthalenesulfonic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
120-18-3	solid	colorless	N/A	N/A	N/A	124–125	1.441	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Reacts violently with water. Emits toxic fumes under fire conditions. May accelerate combustion. Contact with other material may cause fire.			Avoid heat, sparks, flames.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful if inhaled. . Inhalation may result in spasm, inflammation, and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Harmful if absorbed through skin. Irritating to the skin. Causes burns. May cause allergic skin reaction.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Harmful to the eyes. Extremely destructive to tissue in eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be fatal if swallowed. . Exposure can cause, burning sensation, wheezing, laryngitis, shortness of breath, headache, coughing, nausea, and vomiting.			Do <i>not</i> eat, drink, or smoke during work.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Carcinogen			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

1-Naphthol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
90-15-3	crystalline powder	white	phenolic	N/A	278–280	95–96	1.10	1 @ 94	4.5	very slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			No flames, no sparks, no contact with hot surfaces.			Water spray, dry chemical, alcohol foam, or carbon dioxide.		
Inhalation		Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Inhalation may result in symptoms and problems similar to ingestion.			Ventilation, local exhaust., or breathing protection.			Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.		
Skin		May cause severe irritation, redness, and pain. May be absorbed through the skin with symptoms paralleling ingestion and causing kidney damage. Local action may cause peeling of the skin which may be followed by persistent pigmentation.			Protective gloves and clothing..			Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention.		
Eyes		Causes irritation, redness, pain, and injury to the cornea and lens of the eyes.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.		
Ingestion		Large doses may cause crampy abdominal pain, nausea, vomiting, sweating, intense thirst, cyanosis.			Do <i>not</i> eat or drink in the laboratory.			Induce vomiting immediately as directed by medical personnel. Get medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Naphthol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
135-19-3	solid	white	distinct mothball-like	153	285-286	122-123	1.2	3.6 @ 130	4.97	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical.		
Inhalation		Sweating, intense thirst, nausea, vomiting, diarrhea, hyperactivity, stupor, hypotension, hyperapnea, and abdominal pain.			Ventilation, local exhaust.			Remove from exposure immediately, keep warm and at rest, get medical attention immediately.		
Skin		Blanching, erythema, tissue destruction, may be absorbed to cause effect as given under inhalation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Irritation, redness, and pain.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes.		
Ingestion		May cause effects as given under inhalation.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. If vomiting occurs, keep head lower than hips; get medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1-Naphthyl Isocyanate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
86-84-0	liquid	colorless	faint	109	267 @ 760 torr	N/A	1.177	N/A	5.8	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, carbon dioxide, regular foam			
Inhalation		Irritation, coughing, chest pains, difficulty breathing, allergic respiratory reaction, and unconsciousness.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Allergic skin reaction, irritation, pain, and possibly burns.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.			
Eyes		Irritation, pain, and burn .			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.			
Ingestion		Bile stasis and the cessation of bile flow.			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs keep head lower than hips, get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Nitric Acid, Concentrated

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7697-37-2	liquid	colorless to yellow	distinct	N/A	100	N/A	1.36–1.41	45 @ 25	1	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials		Regular dry chemical, soda ash, water.			
Inhalation		Severe respiratory irritation, coughing, choking, yellowish burns of the mucous membranes, headache, and nausea.			Ventilation, local exhaust.		Remove from exposure immediately, keep warm and at rest, get medical attention immediately.			
Skin		Severe pain, burns, yellowish stains.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical help immediately.			
Eyes		Pain, lacrimation, photophobia, burns, blindness.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention, and continue to wash eyes with water.			
Ingestion		Corrosion of the mucous membranes of the mouth, throat and esophagus, immediate pain and difficulty or inability to swallow or speak, vomiting, and diarrhea.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Nitric Acid, Fuming

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
Nitric Acid 7697-37-2 Nitrogen Dioxide 10102-44-0	liquid	yellow to red	N/A	N/A	100	N/A	1.4	62 torr @ 25	1	miscible
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials			Regular dry chemical, soda ash, water.		
Inhalation		Nitric Acid: coughing, headache, dizziness, and weakness. Delayed symptoms: dryness of the throat and nose, and chest pain or tightness. Nitrogen Dioxide: usually no symptoms at time of exposure. Delayed symptoms: fatigue, uneasiness, restlessness, and cough.			Ventilation, local exhaust.			Remove from exposure immediately; keep warm and at rest; get medical attention immediately.		
Skin		Nitric Acid: immediate severe and penetrating burns, staining the skin yellow or yellowish-brown. Nitrogen Dioxide: severe irritation, pain, yellow-brown discoloration, and burns.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Nitric Acid: pain, photophobia, tearing, edema, corneal ulceration, and severe burns. Nitrogen Dioxide: severe irritation with redness, pain, blurred vision, edema of the eyelids, corneal ulceration, and burns.			Safety goggles.			Thoroughly wash eyes with water for several min., remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.		
Ingestion		Nitric Acid: immediate pain in the mouth, throat, and stomach, nausea, vomiting, and diarrhea. Nitrogen Dioxide: acid taste, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

3-Nitroaniline

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
99-09-2	solid	yellow	N/A	N/A	304	112–114	1.43	N/A	N/A	0.089 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.			No open flames or sparks.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful by inhalation. May cause cyanosis; onset may be delayed 2-4 hours.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May be fatal if absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Causes eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May cause cyanosis; onset may be delayed for 2–4 hours.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

4-Nitroaniline

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
100-01-6	solid	pale yellow	N/A	164	260 @ 100 torr	149–151	1.424	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, dry chemical, foam, or carbon dioxide.		
Inhalation		Exposure can cause, headache, unconsciousness, coughing, chest pains, difficulty breathing, nausea, cyanosis, ataxia, diarrhea, and vomiting.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Toxic if in contact with skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		Toxic if swallowed. Exposure to and/or consumption of alcohol may increase toxic effects. Exposure can cause, headache, unconsciousness, coughing, chest pains, difficulty breathing, nausea, cyanosis, ataxia, diarrhea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water provided person is conscious. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Nitrobenzene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
98-95-3	oily liquid	pale yellow	almond-like	88	211	-5.7	1.2	1 @ 44.4	4.3	practically insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible. Gives off irritating or toxic fumes (or gases) in a fire.			No flames, no sparks, no contact with hot surfaces.			Powder, alcohol-resistant foam, water spray, carbon dioxide.		
Inhalation		Blue lips or fingernails. Blue skin. Dizziness. Headache. Nausea. Unconsciousness. Weakness.			Ventilation, local exhaust.			Fresh air, rest. Refer for medical attention.		
Skin		MAY BE ABSORBED! Blue lips or fingernails. Blue skin.			Protective gloves and clothing.			Remove contaminated clothes. Rinse and then wash skin with water or shower. Refer for medical attention.		
Eyes		Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if easily possible; seek medical attention.		
Ingestion		May cause headache, shallow respiration, dizziness, vomiting, weakness, and blood pressure falls.			Do not eat or drink in the laboratory.			Rinse mouth. Induce vomiting. Rest. Refer for medical attention.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Norbornene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
498-66-8	solid	N/A	sharp	-14	96	44-46	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, sand, earth, regular foam, water		
Inhalation		Irritation.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion					Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

exo-Norborneol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
497-37-0	solid	white	N/A	N/A	176–177	124-126	N/A	N/A	N/A	slightly soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.			Carbon dioxide, regular chemical powder, foam, water.		
Inhalation		May be harmful.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, may be harmful if absorbed through skin.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		May be harmful.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Nylon-6,10

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
9008-66-6	solid	white	N/A	N/A	N/A	N/A	1.040	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			No open flames or sparks.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful by inhalation. Do <i>not</i> breathe vapor.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		May cause eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Petroleum ether 30-60										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
68476-50-6	liquid	colorless	hydrocarbon	-46	30-40	N/A	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard; vapor may travel considerable distance to ignition source and flash back, container explosion may occur under fire conditions.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled. Vapor is irritating to the upper respiratory track.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Seek medical advice.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		May causes eye irritation.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed. Symptoms of exposure may include CNS depression and diarrhea.			Do not eat or drink in the laboratory.			If swallowed, wash out mouth with water. Seek medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: CAS No. = Chemical Abstracts Service Registry Number; PS = physical state; FP = flash point (°C); BP = boiling point (°C) @ 760 torr unless otherwise stated; MP = melting point (°C); d = density or specific gravity (g/mL); VP = vapor pressure (torr) at specified temperature (°C); VD = vapor density (g/mL); Sol = solubility in water; N/A = not available or not applicable.

Phenol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-95-2	solid	colorless or white	tar-like	79	182	40–42	1.071	0.35 @ 25	3.24	6.7%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard., vapors or gases may ignite at distant ignition sources.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.			Regular dry chemical, regular foam, alcohol resistant foam.		
Inhalation		Severe irritation of the mucous membranes, profuse sweating, headache, intense thirst, nausea, vomiting, abdominal pain, and diarrhea.			Ventilation, local exhaust.			Remove from exposure immediately; keep warm and at rest, get medical attention immediately.		
Skin		Local anesthesia, skin necrosis, painless burns due to damage to nerve endings, readily absorbed through the skin causing symptoms given in inhalation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Severe irritation, redness, pain, blurred vision, severe blindness, and loss of the eye.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.		
Ingestion		Burning of the mouth and throat, abdominal pain, pale face, contracted or dilated pupils, circulatory collapse, tachypnea, paralysis, convulsions, coma, jaundice, necrosis of mouth and gastrointestinal tract.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Phenolphthalein

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
77-09-8	solid	colorless	N/A	N/A	N/A	261	1.3	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Flammable. Emits toxic fumes under fire conditions.		Avoid heat, sparks, flames.		Water spray, carbon dioxide, dry chemical powder or appropriate foam.				
Inhalation		May be irritating if inhaled.		Ventilation, local exhaust.		Remove to fresh air. If breathing is difficult, give oxygen.				
Skin		Irritating to the skin.		Protective gloves and clothing.		Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.				
Eyes		Vapor or mist is irritating to the eyes.		Safety goggles.		Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.				
Ingestion		Toxic, harmful if swallowed.		Do <i>not</i> eat or drink in the laboratory.		If swallowed wash out mouth with water. Call a physician.				
Carcinogenicity		Possible carcinogen				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Phenylhydrazine

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
100-63-0	liquid	colorless	faint aromatic	88	243.5	19	1.1	1 @ 71.8	3.7	slightly soluble in hot water
Types of Hazard/Exposure		Acute Hazards/Symptoms				Prevention		First Aid/Fire		
Fire		Combustible. Gives off irritating or toxic fumes (or gases) in a fire.				No flames, no sparks, no contact with hot surfaces.		Water spray, alcohol-resistant foam, powder, carbon dioxide.		
Inhalation		Coughing. Labored breathing. Sore throat. Cyanosis.				Ventilation, local exhaust.		Fresh air, rest. Refer for medical attention.		
Skin		MAY BE ABSORBED! Dry skin. Redness. Pain.				Protective gloves and clothing.		Remove contaminated clothes. Rinse skin with plenty of water or shower. Seek medical attention.		
Eyes		Redness. Pain.				Safety goggles.		First rinse with plenty of water for several minutes; remove contact lenses if easily possible; seek medical attention.		
Ingestion		Abdominal pain. Diarrhea. Nausea. Vomiting. Weakness. Vertigo.				Do not eat or drink in the laboratory.		Rest. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Phenylhydrazine hydrochloride										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
59-88-1	solid	white	N/A	N/A	N/A	250	N/A	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be irritating if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water, lifting upper and lower lids often. Seek medical advice.		
Ingestion		Toxic, harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Carcinogen			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Phenyl Isocyanate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
103-71-9	liquid	colorless	N/A	51	62–64	-30	1.093	2.8	N/A	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Combustible. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Very toxic if inhaled. May cause sensitization.			Ventilation, local exhaust			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Very toxic in contact with skin. May cause sensitization. Causes burns.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Lachrymator. Vapor or mist is irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Toxic, harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Phenylmagnesium Bromide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
100-58-3	solid	white	N/A	-17	N/A	N/A	1.14	N/A	N/A	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Highly flammable. Emits toxic fumes under fire conditions. Ignites on contact with water.			Avoid heat, sparks, flames.			Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful if inhaled. Very irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Caustic will burn skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist burns eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Probable carcinogen			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Phthalic Anhydride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
85-44-9	solid	white	N/A	N/A	284	131–133	1.494	<0.01	5.1	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.		Water spray, carbon dioxide, dry chemical powder or appropriate foam.			
Inhalation		May be harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.		Remove to fresh air. If breathing is difficult, give oxygen.			
Skin		Irritating to the skin.			Protective gloves and clothing.		Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.			
Eyes		Vapor or mist may be irritating to the eyes.			Safety goggles.		Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.			
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.		If swallowed wash out mouth with water. Call a physician.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Picric Acid										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
88-89-1	crystalline solid	yellow	odorless	150	explodes above 300	122	1.77	N/A	N/A	moderate (1-10%)
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable solid. Dangerous fire hazard. when exposed to heat or flame.			No flames, no sparks, no contact with hot surfaces.			Fight fire from protected location or maximum possible distance. Do not use carbon dioxide or halogenated extinguishing agents.		
Inhalation		Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Systemic poisoning can cause headache, dizziness, nausea, vomiting, abdominal pain and diarrhea.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention.		
Skin		Causes irritation to skin. Symptoms include redness, itching, and pain. May cause allergic skin reactions. May be absorbed through the skin with possible systemic effects.			Protective gloves and clothing.			Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Keep contaminated clothing wet after removing.		
Eyes		Fume is irritating to the eyes. Splashes can cause eye injury.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.		
Ingestion		Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Other symptoms may parallel those from inhalation.			Do not eat or drink in the laboratory.			If swallowed, do not induce vomiting. Give large quantities of water. Get medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

(+)- α -Pinene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7785-70-8	liquid	colorless	petroleum-like	32	154–156	N/A	0.857–0.862	N/A	N/A	insoluble

Types of Hazard/Exposure	Acute Hazards/Symptoms	Prevention	First Aid/Fire
Fire	Severe fire hazard., vapors or gases may ignite at distant ignition sources.	No flames, no sparks, no contact with hot surfaces.	Alcohol resistant foam, carbon dioxide, regular dry chemical, water for cooling.
Inhalation	Irritation, destruction to tissue, burning sensation, coughing, wheezing, shortness of breath, dizziness, headache, nausea, and vomiting.	Ventilation, local exhaust.	Remove from exposure immediately; get medical attention.
Skin	Irritation, dermal eruptions, and may be absorbed through skin and cause effects as detailed in inhalation.	Protective gloves and clothing.	Remove contaminated clothes and jewelry, thoroughly wash skin with water.
Eyes	Irritation and burning sensation.	Safety goggles.	Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.
Ingestion	Effects as detailed in inhalation.	Do not eat or drink in the laboratory.	If vomiting occurs, keep head lower than hips; get medical attention, if needed.
Carcinogenicity	Not a known carcinogen.	Mutagenicity	Not a known mutagen.

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Polystyrene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
9003-53-6	solid	colorless to white	odorless	345–360	N/A	86-91	1.04–1.13	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		Irritation and coughing.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		N/A			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Irritation.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Possible carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Potassium Bromide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7758-02-3	solid	white	odorless	N/A	1435	734	2.750	<0.01	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Non-flammable. Emits toxic fumes under fire conditions.			NA			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		May be harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist may be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Potassium tert-Butoxide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
865-47-4	solid	white	N/A	N/A	N/A	256 to 258 (dec)	1.850	1 @ 220	N/A	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful if inhaled. Very irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Caustic, may burn skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist may be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Potassium Carbonate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
584-08-7	solid	colorless or white	odorless	N/A	decomposes	891	2.29	N/A	N/A	112% @ 20
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard.			N/A		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Irritation, coughing, choking, pain, burns of the mucous membranes, and pulmonary edema.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention immediately.			
Skin		Severe pain, burns, and brownish stains.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.			
Eyes		Pain, burns, edema, corneal opacification, permanent opacity, and blindness.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, continue to wash eyes with water.			
Ingestion		Immediate pain, corrosion of the mucous membranes, shortness of breath, laryngitis, headache, nausea, vomiting, profuse salivation, and difficulty or inability to swallow or speak.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Potassium Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7447-40-7	solid	white	N/A	N/A	1420	770	1.984	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Non-flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist may be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water, lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Potassium Ferricyanide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
13746-66-2	solid	orange	N/A	N/A	N/A	N/A	1.850	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Non-flammable. Emits toxic fumes under fire conditions.			NA			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Harmful if inhaled. Very irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist may be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Potassium Fluoride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7789-23-3	solid	white	N/A	N/A	1505	860	2.480	N/A	2	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Non-flammable. Emits toxic fumes under fire conditions.			NA		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		May be harmful if inhaled. Very irritating to respiratory system.			Ventilation, local exhaust.		Remove to fresh air. If breathing is difficult, give oxygen.			
Skin		Irritating to the skin.			Protective gloves and clothing.		Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.			
Eyes		Dust, vapor, or mist may be irritating to the eyes.			Safety goggles.		Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.			
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.		If swallowed wash out mouth with water. Call a physician.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Potassium Hydroxide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1310-58-3	solid	off-white	odorless	N/A	1316	360	2.044	1.0 @ 719	N/A	52%
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Negligible fire hazard.		N/A		Use extinguishing agents appropriate for surrounding fire.				
Inhalation		Irritation, coughing, choking, pain, burns of the mucous membranes, and tightness in the chest.		Ventilation, local exhaust.		Remove from exposure immediately; get medical attention immediately.				
Skin		Severe pain, burns, and brownish stains.		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.				
Eyes		Pain, burns, edema, destruction of epithelium, permanent opacity, and blindness.		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, continue to wash eyes with water.				
Ingestion		Immediate pain, corrosion of the mucous membranes, profuse salivation, and difficulty or inability to swallow or speak.		Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Potassium Iodide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7681-11-0	solid	colorless to white	odorless	N/A	1330	681	3.13 @ 15	1 @ 745	N/A	127.5%
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Negligible fire hazard.		N/A		Use extinguishing agents appropriate for surrounding fire.				
Inhalation		Irritation, coughing, and chest discomfort.		Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.				
Skin		Pimples, boils, hives, blisters, black and blue spots.		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Irritation, redness, pain, corrosive.		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.				
Ingestion		Gastrointestinal upset, nausea, and vomiting.		Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give milk then starch solution; if vomiting occurs, keep head lower than hips.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Potassium Permanganate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7722-64-7	solid	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials.		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Irritation, labored breathing, choking, pain in the nose, mouth and throat, and burns of the mucous membranes.			Ventilation, local exhaust.		Remove from exposure immediately, keep warm and at rest; get medical attention immediately.			
Skin		Burns, redness, and pain.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.			
Eyes		Burns, redness, pain, lacrimation, and blurred vision.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Inflammation, nausea, vomiting, and difficulty speaking or swallowing. Overexposure can cause anemia and kidney damage.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

1-Propanol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
71-23-8	liquid	clear	alcohol	23	97	-127	0.804	21 @ 25	2.07	infinitely soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard. Vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Water spray, dry chemical, alcohol foam, or carbon dioxide.		
Inhalation		Vapors have a mild narcotic effect and act as an upper respiratory tract irritant. Symptoms may include irritation of the eyes, nose, and throat, drowsiness, headache, and uncoordination.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Call a physician.		
Skin		Defatting agent. May cause skin irritation. Skin absorption may occur with symptoms paralleling those from inhalation exposure.			Protective gloves and clothing.			In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.		
Eyes		Vapors are irritating to the eyes. Splashes may cause severe irritation, with stinging, tearing, redness and pain.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.		
Ingestion		May cause nausea, vomiting, drowsiness, gastrointestinal pain, cramps and diarrhea.			Do <i>not</i> eat or drink in the laboratory.			Give large amounts of water to drink. Get medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

2-Propanol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
67-63-0	liquid	colorless	alcoholic	12	82.4	-89.5	0.7855	40 @ 24	2.1	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard. Vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water		
Inhalation		Irritation, chest tightness, wheezing, and large amounts may cause symptoms similar to acute ingestion.			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Irritation, contact dermatitis, and large amounts may result in symptoms similar to acute ingestion.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation, transitory injury, conjunctivitis, iritis, and corneal opacity.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.		
Ingestion		Abdominal pain, nausea, vomiting, and hemorrhage, hypoglycemia, tenderness and edema of muscles, and arrhythmias, vomiting with aspiration may cause aspiration pneumonia. Central nervous system depression may occur with headache and dizziness.			Do not eat or drink in the laboratory.			If vomiting occurs keep head lower than hips, get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Propylene Glycol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
57-55-6	oily liquid	clear	odorless	23	99	-59	1.0361	0.129 @ 25	2.6	miscible
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Can support combustion.		<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.		Dry chemical, foam, water or carbon dioxide.				
Inhalation		No adverse health effects via inhalation.		Ventilation, local exhaust.		Remove to fresh air. Not expected to require first-aid measures.				
Skin		Mild irritant and defatting agent, especially on prolonged contact.		Protective gloves and clothing.		Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.				
Eyes		May cause transitory stinging and tearing.		Safety goggles.		In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician if irritation persists.				
Ingestion		Relatively non-toxic. Ingestion of sizable amount (over 100ml) may cause some gastrointestinal upset and temporary central nervous system depression. Effects appear more severe in individuals with kidney problems.		Do <i>not</i> eat or drink in the laboratory.		Not expected to require first aid measures. Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.				
Carcinogenicity		Not a known carcinogen.		Mutagenicity		Possible mutagen.				

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Pyridine										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
110-86-1	liquid	colorless	N/A	20	115– 116	N/A	0.978	18 @ 20	2.72	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Alcohol resistant foam, carbon dioxide, regular dry chemical, water for cooling.		
Inhalation		Irritation, unpleasant taste in the mouth, narcosis, dizziness, drowsiness, and headache.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Redness, irritation, burns, photosensitivity and sensitization reactions, and subdermal hemorrhages.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation and corneal damage.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Nausea, fatigue, mental depression, vomiting, and diarrhea.			Do not eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Resorcinol										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-46-3	solid	white	N/A	170	280	110–113	1.327	1	3.8	220%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist may be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Toxic, harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

***p*-Rosaniline Hydrochloride (Basic Fuchsin)**

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
569-61-9	solid	green	N/A	N/A	N/A	250	1.22	N/A	N/A	0.1-0.5 g/100 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritant, may be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritant, may be harmful to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes, may be harmful.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity	Possible carcinogen				Mutagenicity	Possible mutagen				

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Salicylamide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
65-45-2	solid	white	N/A	N/A	181.5 @ 14 torr	140–144	1.351	N/A	N/A	2.511 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.		Water spray, carbon dioxide, dry chemical powder or appropriate foam.			
Inhalation		Harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.		Remove to fresh air. If breathing is difficult, give oxygen.			
Skin		Irritating to the skin.			Protective gloves and clothing.		Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.			
Eyes		Vapor or mist may be irritating to the eyes.			Safety goggles.		Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.			
Ingestion		Toxic, harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.		If swallowed wash out mouth with water. Call a physician.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Salicylic Acid										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
69-72-7	fine crystals	white	odorless to slight phenolic	157	211	157–159	1.44	1 torr @ 114	4.8	1 g/460 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Combustible.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.			Carbon dioxide, water spray, powder.		
Inhalation		Cough. Sore throat.			Ventilation, local exhaust.			Fresh air, rest. Refer for medical attention.		
Skin		Redness.			Protective gloves and clothing.			Remove contaminated clothes. Rinse and then wash skin with water and soap.		
Eyes		Redness, pain.			Safety goggles.			First rinse with plenty of water for several minutes; remove contact lenses if easily possible; seek medical attention.		
Ingestion		Nausea, vomiting, ear ringing.			Do <i>not</i> eat or drink in the laboratory.			Rinse mouth. Induce vomiting. Refer for medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Semicarbazide Hydrochloride										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
563-41-7	solid	white	N/A	N/A	N/A	N/A	N/A	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Slight fire hazard.			No flames, no sparks, no contact with hot surfaces.		Carbon dioxide, regular dry chemical.			
Inhalation		Nausea, vomiting, fever, headache, hypotension, weakness, and fatigue.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Redness and irritation			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Nausea, vomiting, sore throat, abdominal pain, and diarrhea.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give large amounts of water or activated charcoal slurry; when vomiting occurs, keep head lower than hips.			
Carcinogenicity		Possible carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Silicon Dioxide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
112926-00-8	solid	white	odorless	N/A	N/A	N/A	2.6	N/A	N/A	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Non-flammable. Emits toxic fumes under fire conditions.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Dust is irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Silver Nitrate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7761-88-8	liquid	colorless	N/A	N/A	440	212	4.352	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Irritation, sore throat, coughing and shortness of breath, headache, nausea, vomiting.			Ventilation, local exhaust.		Remove from exposure immediately, keep warm and at rest, and get medical attention immediately.			
Skin		Irritation, redness, pain, ulceration, and discoloration.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical help immediately.			
Eyes		Irritation, redness, pain, burns, discoloration, and blindness.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, continue to wash eyes with water.			
Ingestion		Burning mouth and throat, salivation, violent abdominal pain and rigidity, diarrhea, headache, nausea, vomiting, and cyanosis.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give salt water; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7440-23-5	metal	light, silvery white	odorless	115	881.7	97.8	0.968	1.2 @ 400	0.003	decomposes violently in water
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable solid, water reactive. Can react vigorously with water, steam, acids to release flammable/explosive hydrogen. Dangerous in presence of oxidants. May ignite spontaneously in moist air or oxygen. May re-ignite after fire is extinguished.			Avoid open flames or sparks. Keep from water.			Use dry soda ash, dry salt, sand, graphite powder or metal-fire-extinguishing dry powder such as Met-L-X™. Do <i>not</i> use water, foam, carbon dioxide, dry chemical, or chlorinated fire extinguishers.		
Inhalation		Inhalation produces damaging effects on the mucous membranes and upper respiratory tract. Symptoms may include irritation of the nose and throat, and labored breathing.			Ventilation, local exhaust.			If inhaled, remove to fresh air. Get medical attention immediately.		
Skin		Corrosive, can cause serious burns due to almost immediate reaction with water, especially on moist skin. If metal ignites, very deep burns and tissue destruction can occur.			Protective gloves and clothing.			Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention.		
Eyes		Corrosive. May cause redness, pain, blurred vision, and damage from severe alkali burns.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.		
Ingestion		Extremely dangerous, corrosive material. Will react immediately with saliva to cause serious burns and possible local combustion.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, do <i>not</i> induce vomiting. Give large quantities of water. Get medical attention immediately.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Acetate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
127-09-3	solid	N/A	N/A	N/A	N/A	324 decomposes	1.528	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, carbon dioxide, water, regular foam		
Inhalation		Irritation, coughing, and shortness of breath			Ventilation, local exhaust.			Remove from exposure immediately, get medical attention.		
Skin		Irritation			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Abdominal pain and vomiting			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Acetate, Trihydrate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
6131-90-4	solid	N/A	odorless	N/A	123	58	1.45	N/A	N/A	76.2% @ 0
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Slight fire hazard.			Avoid heat, sparks, flames.			Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		Irritation, coughing, and shortness of breath.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Abdominal pain and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Bicarbonate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
144-55-8	solid	white	odorless	N/A	N/A	300	2.159	N/A	N/A	10%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard.			N/A		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Irritation, sore throat, and coughing.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation, redness, and pain.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Irritation of the mouth, esophagus, and stomach. Alkalosis.			Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Bisulfite

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7631-90-5	solid	white	N/A	N/A	decomposes	decomposes	1.32	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard.			N/A		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Irritation, sore throat, coughing, and shortness of breath.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation, corrosion.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation, corrosion, and grayness and irregularity of the corneal epithelium.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Irritation of the stomach, abdominal pain, and nausea. Those with preexisting respiratory conditions may experience hypersensitivity: symptoms include bronchospasm, gastrointestinal disturbances, hypotension, and shock.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Borohydride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
16940-66-2	solid	white, off-white	odorless	318	N/A	300–400 decomposes	1.07 4	N/A	1.3	55% @ 25
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Moderate fire hazard.			<i>No</i> flames, <i>no</i> sparks, <i>no</i> contact with hot surfaces.		Regular dry chemical, sand, lime, soda ash			
Inhalation		Severe irritation, sore throat, coughing, shortness of breath, and headache			Ventilation, local exhaust.		Remove from exposure immediately; keep warm and at rest, get medical attention immediately.			
Skin		Chemical and thermal burns, fatal systemic poisoning due to skin absorption			Protective gloves and clothing..		Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.			
Eyes		Severe irritation and chemical and thermal burns			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.			
Ingestion		Sore throat, abdominal pain, diarrhea, headache, dizziness, and corrosion of the gastric mucosa.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Bromide										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7647-15-6	solid	white	odorless	N/A	1390	755	3.210	1 @ 806	N/A	116% @ 50
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Irritation, rashes (especially acne, furunculosis).			Ventilation, local exhaust.			Remove from exposure immediately. Get medical attention.		
Skin		Irritation, rashes (especially acne, furunculosis).			Protective gloves and clothing.			Remove contaminated clothing, jewelry, and shoes immediately. Thoroughly wash with water.		
Eyes		N/A			Safety goggles.			Thoroughly wash eyes with water for several minutes, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Immediate abdominal pain, nausea, vomiting, kidney damage, systemic poisoning, paralysis, and coma.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips. Get medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Carbonate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
497-19-8	crystal-line powder, crystals	colorless to white	odorless	N/A	decomposes	851	2.536	N/A	N/A	7.1% @ 0
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard.			N/A		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Irritation, coughing, and shortness of breath.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation and redness			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Severe irritation, redness, pain, and blurred vision			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, continue to wash eyes with water.			
Ingestion		Corrosion of the gastric mucosa, sore throat, gastrointestinal disturbances, nausea, vomiting, abdominal pain, and diarrhea.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Chlorate										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7775-09-9	solid	white	N/A	N/A	decomposes	248-261	2.49	N/A	N/A	79g/100mL @ 0
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Irritation with sore throat, coughing, headache, dizziness, and faintness.			Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.			
Skin		Irritation.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation.			Safety goggles.		Thoroughly wash eyes with water for several minutes, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Irritation of the gastrointestinal mucosa, abdominal pain, nausea, vomiting, and diarrhea.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. If vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7647-14-5	crystalline powde	colorless to white	odorless	N/A	1413	801	2.165	N/A	N/A	35.7% @ 0
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Negligible fire hazard.		N/A		Use extinguishing agents appropriate for surrounding fire.				
Inhalation		Coughing, dryness, and sore throat.		Ventilation, local exhaust.		Remove from exposure immediately, get medical attention.				
Skin		Irritation		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Redness, pain, irritation and a stinging sensation		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention.				
Ingestion		Dryness of mucous membranes, a violent inflammatory reaction in the gastrointestinal tract, and ulceration if very large doses are taken.		Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.				
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Citrate, Dihydrate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
6132-04-3	solid	white	N/A	N/A	N/A	>300	N/A	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		May be harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Sodium Dichromate, Dihydrate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7789-12-0	solid	red to orange	N/A	N/A	N/A	91	2.350	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Flammable. Emits toxic fumes under fire conditions. Vigorously supports combustion.			Avoid heat, sparks, flames.		Water spray, carbon dioxide, dry chemical powder or appropriate foam.			
Inhalation		Harmful if inhaled, toxic.			Ventilation, local exhaust.		Remove to fresh air. If breathing is difficult, give oxygen.			
Skin		Irritating to the skin, may cause burns. May be toxic			Protective gloves and clothing.		Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.			
Eyes		Irritating to the eyes. May be toxic			Safety goggles.		Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.			
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.		If swallowed wash out mouth with water. Call a physician.			
Carcinogenicity		Carcinogenic			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Sodium Hydroxide										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1310-73-2	solid	white	odorless	N/A	1390	318	2.130	100 @ 1111	>1	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Irritation, sore throat, burning sensation, laryngitis, coughing, destruction of mucous membranes, headache, nausea, vomiting, and delayed pulmonary edema.			Ventilation, local exhaust.			Remove from exposure immediately, keep warm and at rest; get medical attention immediately.		
Skin		Redness, cutaneous burns, and skin fissures.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.		
Eyes		Disintegration and sloughing of conjunctival and corneal epithelium, corneal opacification, edema, ulceration, and blindness.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention, continue to wash eyes with water.		
Ingestion		Corrosion of the lips, mouth, tongue and pharynx, severe esophageal and abdominal pain, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Hypochlorite

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7681-52-9	liquid	yellow, green	chlorine-like	N/A	N/A	N/A	1.097	17.5 @ 20	N/A	100%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Severe burns, severe bronchial irritation, sore throat, blistering, coughing, nausea, and labored breathing.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention immediately.			
Skin		Redness, pain, blistering, itchy eczema, and chemical burns.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.			
Eyes		Severe pain, hemorrhages, corneal opacification, edema, ulceration, and blindness.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention, and continue to wash eyes with water.			
Ingestion		Inflammation of the mouth and digestive system, circulatory collapse, confusion, delirium, and drop in blood pressure.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Do <i>not</i> induce vomiting; give milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Not a known carcinogen.				Mutagenicity		Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Iodide										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7681-82-5	crystals, powder	colorless to white	odorless	N/A	1304	661	3.67	1 @ 767	N/A	184%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Irritation. Prolonged exposure may produce iodism in sensitive individuals.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Enlargement of salivary glands or lymph glands.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Lead Alloy

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
12740-44-2	solid	gray	N/A	N/A	N/A	N/A	N/A	N/A	N/A	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Extremely flammable, reacts violently with water, liberating extremely flammable gasses.			No open flames or sparks, protect from moisture.			Use approved class D extinguisher or smother with dry sand; do <i>not</i> use water or CO ₂ .		
Inhalation		Harmful if inhaled. Very irritating to respiratory system, causes burns.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Very caustic, causes burns.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist very caustic to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Sodium Nitrite

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7632-00-0	solid	colorless to yellow	odorless	N/A	N/A	271	2.168 @ 0	N/A	N/A	82% @ 15
Types of Hazard/Exposure										
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Irritation, sore throat, and shortness of breath.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Redness and irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation and dilation of pupils.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Gastrointestinal irritation with nausea, vomiting, diarrhea, and abdominal pains, dizziness, confusion, and lethargy.			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; turn head to side, and get medical attention immediately.		
Carcinogenicity										
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sodium Nitroprusside										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
13755-38-9	solid	dark red	N/A	N/A	N/A	N/A	1.720	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Noncombustible. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Use extinguishing media appropriate to surrounding fire.		
Inhalation		Highly toxic, may be fatal if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Highly toxic, may be fatal if absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is highly toxic.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		Highly toxic, may be fatal if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Sodium Sulfate

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7757-82-6	crystals, powder	white	odorless	N/A	N/A	884	2.671	N/A	N/A	17% @ 20
Types of Hazard/Exposure										
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Irritation.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Diarrhea, fluid loss, blood in stools, and hypotension.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. If vomiting occurs, keep head lower than hips.		
Carcinogenicity										
Carcinogenicity		Known carcinogen.			Mutagenicity			Known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

(E)-Stilbene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
103-30-0	solid	colorless	N/A	N/A	305–307	122–125	0.970	N/A	N/A	almost insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire	Slight fire hazard.			No flames, no sparks, no contact with hot surfaces.			Regular dry chemical, carbon dioxide, water, regular foam.			
Inhalation	N/A			Ventilation, local exhaust.			Remove from exposure immediately. Get medical attention.			
Skin	Irritation.			Protective gloves and clothing.			Remove contaminated clothing, jewelry, and shoes immediately. Thoroughly wash with water.			
Eyes	Irritation, itching, lacrimation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek immediate medical attention.			
Ingestion	Harmful if swallowed.			Do not eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips. Get medical attention.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

(Z)-Stilbene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
645-49-8	liquid	pale yellow	N/A	>110	82-84	-5	1.02	N/A	N/A	insoluble
Types of Hazard/Exposure										
Fire	Acute Hazards/Symptoms			Prevention			First Aid/Fire			
Fire	Moderate fire hazard.			No flames, no sparks, no contact with hot surfaces.			Carbon dioxide, regular chemical powder, foam, water.			
Inhalation	May be harmful.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.			
Skin	Irritation, may be harmful if absorbed through skin.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes	Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek immediate medical attention.			
Ingestion	May be harmful.			Do not eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.			
Carcinogenicity										
Not a known carcinogen.										
Mutagenicity										
Not a known mutagen.										

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

d,l-Stilbene Dibromide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
5789-30-0	solid	white	N/A	N/A	N/A	113–115	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.*			Avoid flames, sparks, and contact with hot surfaces			Water spray, dry chemical, foam, or carbon dioxide.		
Inhalation		May be harmful if inhaled. Vapor is irritating to respiratory system. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.*			Ventilation, local exhaust.			Remove from exposure immediately, artificial respiration if needed; get medical attention.		
Skin		May cause skin irritation.*			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Lachrymator. Vapor or mist is irritating to the eyes.*			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		May be harmful if swallowed. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.*			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.*			Mutagenicity			Not a known carcinogen*		

*Toxicological information for the listed chemical is *not* available. Information given pertains to *meso-stilbene dibromide* and is intended to be used for comparison of a similar compound. Other effects may result from contact, inhalation, or ingestion.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

meso-Stilbene Dibromide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
13440-24-9	solid	white	N/A	N/A	N/A	241	N/A	N/A	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Emits toxic fumes under fire conditions.			Avoid flames, sparks, and contact with hot surfaces			Water spray, dry chemical, foam, or carbon dioxide.		
Inhalation		May be harmful if inhaled. Vapor is irritating to respiratory system. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Ventilation, local exhaust.			Remove from exposure immediately, artificial respiration if needed; get medical attention.		
Skin		May cause skin irritation.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Lachrymator. Vapor or mist is irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		May be harmful if swallowed. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen			Mutagenicity			Not a known carcinogen		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Styrene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
100-42-5	liquid	colorless	varying	31	145–146	-31	0.909	10 @ 31	3.6	0.02%
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		SEVERE fire hazard., vapors or gases may ignite at distant ignition sources.		No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, carbon dioxide, water for cooling, regular foam.				
Inhalation		Irritation, headache, fatigue, difficulty in concentrating, central nervous system depression, nausea, weakness, dizziness, and inertia.		Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.				
Skin		Irritation, redness, cracking, inflammation, defatting and degreasing of the skin; absorption may result in symptoms given in inhalation.		Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.				
Eyes		Irritation, redness, pain, lacrimation, blurred vision, and slight reversible corneal damage.		Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.				
Ingestion		Irritation of the mouth, throat, and gastrointestinal tract, and symptoms given in inhalation.		Do <i>not</i> eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.				
Carcinogenicity		Suspected carcinogen.		Mutagenicity		Known mutagen.				

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Succinic Acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
110-15-6	solid	white	N/A	N/A	235	187–190	1.55	0.009	N/A	56.5 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritating if inhaled, may be toxic.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritating to the skin, may be harmful.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is severely irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Sucrose										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
57-50-1	crystals	N/A	characteristic caramel	N/A	N/A	160–186	1.59	N/A	N/A	1.5 g/0.5 mL
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Not considered to be a fire hazard.			N/A		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Not expected to be a health hazard. Nuisance dust. Inhalation of high concentrations may cause coughing and upper respiratory tract irritation.			Ventilation, local exhaust.		Remove to fresh air. Get medical attention for any breathing difficulty.			
Skin		No adverse effects expected.			Protective gloves and clothing.		Not expected to require first-aid measures.			
Eyes		No adverse effects expected but dust may cause mechanical irritation.			Safety goggles.		Wash thoroughly with running water. Get medical advice if irritation develops.			
Ingestion		Extremely large oral dosages may produce gastrointestinal disturbances.			Do <i>not</i> eat or drink in the laboratory.		If large amounts were swallowed, give water to drink and get medical advice.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sulfanilamide

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
63-74-1	solid	white	odorless	N/A	N/A	165–167	1.08	N/A	N/A	7.5%
Types of Hazard/Exposure										
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Negligible fire hazard.			N/A			Use extinguishing agents appropriate for surrounding fire.		
Inhalation		Harmful.			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation.			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		Cyanosis, anorexia, vomiting, dizziness, and drowsiness.			Do <i>not</i> eat or drink in the laboratory.			Contact physician immediately. Give sodium bicarbonate solution; if vomiting occurs, keep head lower than hips.		
Carcinogenicity										
Carcinogenicity		Possible carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

3-Sulfolene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
77-79-2	crystals	off-white	N/A	109	N/A	65–66	N/A	N/A	N/A	soluble
Types of Hazard/Exposure										
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Moderate fire hazard.			<i>No flames, no sparks, no contact with hot surfaces.</i>			Carbon dioxide, regular chemical powder, foam, water		
Inhalation		May be harmful			Ventilation, local exhaust.			Remove from exposure immediately; get medical attention.		
Skin		Irritation, may be harmful if absorbed through skin			Protective gloves and clothing.			Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation			Safety goggles.			Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		May be harmful			Do <i>not</i> eat or drink in the laboratory.			If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity										
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sulfuric Acid, Fuming										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
Sulfuric acid 7664-93-9 Sulfur trioxide 7446-11-9	liquid	yellow	pungent	N/A	100	N/A	1.84	1	<0.3	reacts violently
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard.			N/A		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Sore throat, labored breathing, coughing, choking, chronic respiratory tract damage, and chronic bronchitis.			Ventilation, local exhaust.		Remove from exposure immediately, keep warm and at rest, get medical attention immediately.			
Skin		Severe irritation, pain, and burns.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.			
Eyes		Severe damage and blindness.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.			
Ingestion		Serious burns of the mouth and esophagus, pain in the abdomen, vomiting, and diarrhea.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sulfuric Acid Solutions

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7664-93-9	liquid	colorless	N/A	N/A	100	N/A	1.84	1	<0.3	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard., may ignite or explode on contact with combustible materials.			Avoid contact with combustible materials		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Irritation, shallower and more rapid breathing, sneezing, a burning or tickling sensation in the nose and throat, and cough.			Ventilation, local exhaust.		Remove from exposure immediately, keep warm and at rest, get medical attention immediately.			
Skin		Second and third degree skin burns, necrosis, charring, and shock.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, and get medical attention immediately.			
Eyes		Burning or stinging sensation, lacrimation, blurred vision, and conjunctival congestion.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.			
Ingestion		Burning pain in the mouth, throat, esophagus and abdomen, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Sulfuryl Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7791-25-5	liquid	colorless to pale yellow	sharp	none	68–70	-54	1.680	100 @ 17.8	4.65	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms		Prevention		First Aid/Fire				
Fire		Flammable, reacts violently with water. Emits toxic and extremely flammable fumes under fire conditions.		Avoid heat, sparks, flames.		Extinguish with dry chemical extinguisher; do <i>not</i> use water.				
Inhalation		Extremely destructive to mucous membranes, may be fatal if inhaled.		Ventilation, local exhaust.		Remove to fresh air. If breathing is difficult, give oxygen.				
Skin		Causes burns, may be fatal if absorbed through skin.		Protective gloves and clothing.		Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.				
Eyes		Vapor or mist is very damaging to the eyes.		Safety goggles.		Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.				
Ingestion		May be fatal if swallowed.		Do <i>not</i> eat or drink in the laboratory.		If swallowed wash out mouth with water. Call a physician.				
Carcinogenicity		Not a known carcinogen.		Mutagenicity		Not a known mutagen.				

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

L-Tartaric acid

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
87-69-4	solid	white	N/A	150	N/A	170–172	1.760	N/A	N/A	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Fire possible at elevated temperatures or by contact with an ignition source. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, Carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritant to respiratory system			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.		
Skin		Irritant to skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes.		
Eyes		Irritant to eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids occasionally. Seek medical advice.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Tetrachloroethylene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
127-18-4	liquid	none	N/A	None	121	-22	1.623	19	5.83	0.165 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Noncombustible. Emits toxic fumes under fire conditions.			N/A			Use extinguishing media appropriate to surrounding materials.		
Inhalation		Harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Harmful if absorbed through skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Harmful to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Thionyl Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7719-09-7		clear, pale yellow	pungent	N/A	76	-105	1.64	100 @ 21	N/A	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Not considered to be a fire hazard. May react violently with water or moist air. Can liberate flammable hydrogen gas when in contact with metal and moisture.			N/A		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.			Ventilation, local exhaust.		Remove to fresh air. Get medical attention immediately.			
Skin		Corrosive. Liquid contact may cause blistering burns, irritation, and pain. Vapors may be severely irritating to the skin.			Protective gloves and clothing.		Wipe off excess material from skin then immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.			
Eyes		Corrosive! Vapors are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.			Safety goggles.		Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.			
Ingestion		Corrosive. May cause burning pain in throat, abdominal pain, nausea, and vomiting.			Do <i>not</i> eat or drink in the laboratory.		If swallowed, do <i>not</i> induce vomiting. Give large quantities of water. Get medical attention immediately.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

ations: CAS No. = Chemical Abstracts Service Registry Number; PS = physical state; FP = flash point (°C); BP = boiling point (°C) @ 760 torr unless otherwise stated; MP = melting point (°C); d = density or specific gravity (g/mL); VP = vapor pressure (torr) at specified temperature (°C); VD = vapor density relative to air (1.0); Sol = solubility in water; N/A = not available or not applicable.

Tin										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7440-31-5	granules or flakes	silvery	odorless	N/A	2507	231.9	7.31	1 @ 1609	N/A	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.			No open flames.		Dry sand, graphite, dolomite, sodium chloride. <i>Never</i> use water, halogenated agents, or class A, B, or C extinguishers.			
Inhalation		No adverse effects expected but dust may cause mechanical irritation.			Ventilation, local exhaust.		Not expected to require first-aid measures. Remove to fresh air. Get medical attention for any breathing difficulty.			
Skin		No adverse effects expected. May cause mild irritation and redness.			Protective gloves and clothing.		Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.			
Eyes		No adverse effects expected but dust may cause mechanical irritation.			Safety goggles.		Wash thoroughly with running water. Get medical advice if irritation develops.			
Ingestion		Large doses may cause nausea, vomiting, and diarrhea.			Do <i>not</i> eat or drink in the laboratory.		Induce vomiting immediately as directed by medical personnel.			
Carcinogenicity					Not a known carcinogen.		Mutagenicity		Not a known mutagen.	

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Tin (II) Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7772-99-8	solid	off-white	N/A	N/A	652	246	3.950	N/A	N/A	decomposes
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Nonflammable.			No open flames or sparks, protect from moisture.			Media appropriate for surrounding fire. Extinguish with dry chemical powder.		
Inhalation		Extremely destructive to mucous membranes and lungs.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Corrosive, causes burns.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Extremely destructive to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.		
Ingestion		Harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed, wash out mouth with water provided person is conscious. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = not available or not applicable.

Toluene										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-88-3	liquid	colorless	distinct	4	110.6	-93	0.865	22 @ 20	3.2	0.05% @ 20
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, carbon dioxide, water for cooling, regular foam			
Inhalation		Fatigue, weakness, confusion, headache, nausea, and drowsiness.			Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.			
Skin		Irritation and drying.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.			
Eyes		Irritation and corneal burns.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.			
Ingestion		Abdominal spasms, systemic effects given in inhalation, coughing, and gagging.			Do not eat or drink in the laboratory.		Contact physician immediately. If vomiting occurs keep, head lower than hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

p-Toluidine

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
106-49-0	solid	colorless	fish-like	88	200	44–46	0.973	N/A	3.9	0.664 g/L
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire	Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.			
Inhalation	Harmful if inhaled. Irritating to respiratory system.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.			
Skin	Irritating to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.			
Eyes	Vapor or mist may be irritating to the eyes.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advice.			
Ingestion	Toxic, harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.			
Carcinogenicity	Possible carcinogen				Mutagenicity	Possible mutagen				

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Triethylene Glycol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
112-27-6	liquid	colorless	N/A	165	285	-7	1.125	<0.01	5.2	soluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritant, may be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritant, may be harmful to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes, may be harmful.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Trimyristin

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
555-45-3	liquid	colorless	N/A	>110	N/A	56–58	1.080	<0.01	8.95	Insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Flammable. Emits toxic fumes under fire conditions.			Avoid heat, sparks, flames.			Water spray, carbon dioxide, dry chemical powder or appropriate foam.		
Inhalation		Irritant, may be harmful if inhaled.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen.		
Skin		Irritant, may be harmful to the skin.			Protective gloves and clothing.			Immediately flush skin with soap and copious amounts of water for at least 15 minutes. Remove contaminated clothing.		
Eyes		Vapor or mist is irritating to the eyes, may be harmful.			Safety goggles.			Immediately flush eyes with copious amounts of water lifting upper and lower lids often. Seek medical advise.		
Ingestion		May be harmful if swallowed.			Do <i>not</i> eat or drink in the laboratory.			If swallowed wash out mouth with water. Call a physician.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Not a known mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density (g/mL); **Sol** = solubility in water; **N/A** = *not* available or *not* applicable.

Triphenylmethanol

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
76-84-6	solid	colorless to off-white	N/A	N/A	380	164	1.1999	N/A	N/A	insoluble
Types of Hazard/Exposure										
Types of Hazard/Exposure		Acute Hazards/Symptoms				Prevention		First Aid/Fire		
Fire		Slight fire hazard.				No flames, no sparks, no contact with hot surfaces.		Regular dry chemical, carbon dioxide, water, regular foam.		
Inhalation		May be harmful.				Ventilation, local exhaust.		Remove from exposure immediately; get medical attention.		
Skin		May be harmful.				Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water.		
Eyes		Irritation.				Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, and seek medical attention immediately.		
Ingestion		May be harmful.				Do not eat or drink in the laboratory.		If vomiting occurs, keep head lower than hips; get medical attention, if needed.		
Carcinogenicity										
Not a known carcinogen.					Mutagenicity		Not a known mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Urea										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
57-13-6	crystals or powder	white	ammonia-like	N/A	Decomposes	135	1.32	N/A	N/A	N/A
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire		Not considered to be a fire hazard.			N/A			Use any means suitable for extinguishing surrounding fire.		
Inhalation		Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. May be absorbed into the bloodstream with symptoms similar to ingestion.			Ventilation, local exhaust.			Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention.		
Skin		Causes irritation to skin. Symptoms include redness, itching, and pain.			Protective gloves and clothing.			Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur.		
Eyes		Causes irritation, redness, and pain.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.		
Ingestion		Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. May also cause headache, confusion and electrolyte depletion.			Do <i>not</i> eat or drink in the laboratory.			Induce vomiting immediately as directed by medical personnel. Get medical attention.		
Carcinogenicity		Not a known carcinogen.			Mutagenicity			Possible mutagen.		

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

m-Xylene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
108-38-3	liquid	clear	aromatic	26	138	-48	0.86	9 @ 20	3.7	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire	Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Dry chemical, foam or carbon dioxide.			
Inhalation	Inhalation of vapors may be irritating to the nose and throat. Inhalation of high concentrations may result in nausea, vomiting, headache, ringing in the ears, and severe breathing difficulties that may be delayed in onset..			Ventilation, local exhaust.			If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Call a physician.			
Skin	Skin contact results in loss of natural oils and often results in a characteristic dermatitis. May be absorbed through the skin.			Protective gloves and clothing.			Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention.			
Eyes	Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.			
Ingestion	Ingestion causes burning sensation in mouth and stomach, nausea, vomiting and salivation.			Do not eat or drink in the laboratory.			Aspiration hazard. If swallowed, do not induce vomiting. Give large quantities of water. Get medical attention immediately. If vomiting occurs, keep head below hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

p-Xylene

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
106-42-3	liquid	clear	aromatic	27.2	138	13–14	0.86	9 torr @ 20	3.7	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention			First Aid/Fire		
Fire	Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.			Dry chemical, foam or carbon dioxide..			
Inhalation	Inhalation of vapors may be irritating to the nose and throat. Inhalation of high concentrations may result in nausea, vomiting, headache, ringing in the ears, and severe breathing difficulties that may be delayed in onset.			Ventilation, local exhaust.			If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Call a physician.			
Skin	Skin contact results in loss of natural oils and often results in a characteristic dermatitis. May be absorbed through the skin.			Protective gloves and clothing.			Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention.			
Eyes	Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.			Safety goggles.			Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.			
Ingestion	Ingestion causes burning sensation in mouth and stomach, nausea, vomiting and salivation..			Do not eat, drink, or smoke during work.			Aspiration hazard. If swallowed, do <i>not</i> induce vomiting. Give large quantities of water; if vomiting occurs, keep head below hips. Get medical attention immediately.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Xylenes										
CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
1330-20-7	liquid	clear	aromatic	9	137–140	-25	0.86	8 @ 20	3.7	insoluble
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Severe fire hazard., vapors or gases may ignite at distant ignition sources.			No flames, no sparks, no contact with hot surfaces.		Dry chemical, foam or carbon dioxide.			
Inhalation		Inhalation of vapors may be irritating to the nose and throat.			Ventilation, local exhaust., or breathing protection.		If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Call a physician.			
Skin		Skin contact results in loss of natural oils and often results in a characteristic dermatitis. May be absorbed through skin.			Protective gloves and clothing.		Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention.			
Eyes		Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.			Safety goggles.		Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.			
Ingestion		Ingestion causes burning sensation in mouth and stomach, nausea, vomiting and salivation. Minute amounts aspirated into the lungs can produce a severe hemorrhagic pneumonitis with severe pulmonary injury or death.			Do not eat or drink in the laboratory		Aspiration hazard. If swallowed, do not induce vomiting. Give large quantities of water. If vomiting occurs, keep head below hips.			
Carcinogenicity		Not a known carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the *Material Safety Data Sheet* for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.

Zinc Chloride

CAS No.	PS	Color	Odor	FP	BP	MP	d	VP	VD	Sol
7646-85-7	crystals	white	odorless	N/A	732	293	2.91	1	N/A	432%
Types of Hazard/Exposure		Acute Hazards/Symptoms			Prevention		First Aid/Fire			
Fire		Negligible fire hazard.			N/A		Use extinguishing agents appropriate for surrounding fire.			
Inhalation		Irritation, metallic taste, lacrimation, sore throat, hoarseness, chest pain, soreness, nausea, abdominal pain, and vomiting.			Ventilation, local exhaust.		Remove from exposure immediately, keep warm and at rest, get medical attention immediately.			
Skin		Irritation, redness, pain, papular and primary dermatitis, chemical burns, boils, and ulceration.			Protective gloves and clothing.		Remove contaminated clothes and jewelry, thoroughly wash skin with water, get medical attention immediately.			
Eyes		Irritation, pain, redness, blurred vision, corneal burns, ulceration, conjunctivitis, dermatitis, and iritis.			Safety goggles.		Thoroughly wash eyes with water for several min, remove contact lenses if possible, seek medical attention immediately, and continue to wash eyes with water.			
Ingestion		Irritation of mucous membranes, corrosion, swollen lips, sore throat, chest pain, nausea, vomiting, and bloody diarrhea.			Do <i>not</i> eat or drink in the laboratory.		Contact physician immediately. Give water or milk; if vomiting occurs, keep head lower than hips.			
Carcinogenicity		Possible carcinogen.			Mutagenicity		Possible mutagen.			

For more detailed information consult the [Material Safety Data Sheet](#) for this compound.

Abbreviations: **CAS No.** = Chemical Abstracts Service Registry Number; **PS** = physical state; **FP** = flash point (°C); **BP** = boiling point (°C) @ 760 torr unless otherwise stated; **MP** = melting point (°C); **d** = density or specific gravity (g/mL); **VP** = vapor pressure (torr) at specified temperature (°C); **VD** = vapor density relative to air (1.0); **Sol** = solubility in water; **N/A** = not available or not applicable.