

## SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Base Neutrals Extractables Mixture - 625</b>	
<b>Other means of identification</b>		
<b>Item</b>	M-BN6251AB4	
<b>Recommended use</b>	For Laboratory Use Only	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	Chem Service, Inc.	
<b>Address</b>	660 Tower Lane West Chester, PA 19380 United States	
<b>Telephone</b>	Toll Free	800-452-9994
	Direct	610-692-3026
<b>Website</b>	www.chemservice.com	
<b>E-mail</b>	info@chemservice.com	
<b>Emergency phone number</b>	Chemtrec US	800-424-9300
	Chemtrec outside US	+1 703-527-3887

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 2
<b>Health hazards</b>	Acute toxicity, oral	Category 3
	Acute toxicity, dermal	Category 3
	Acute toxicity, inhalation	Category 2
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1A
	Germ cell mutagenicity	Category 1
	Carcinogenicity	Category 1A
	Reproductive toxicity	Category 1
	Reproductive toxicity	Effects on or via lactation
	Specific target organ toxicity, single exposure	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 1
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	

## Label elements



Signal word

Danger

**Hazard statement** Highly flammable liquid and vapor. Toxic if swallowed. May be fatal if swallowed and enters airways. Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Fatal if inhaled. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause harm to breast-fed children. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapor. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

**Response**

If swallowed: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Specific treatment is urgent (see this label). If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.

**Storage**

Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)**

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

**Supplemental information**

40% of the mixture consists of component(s) of unknown acute dermal toxicity. 80% of the mixture consists of component(s) of unknown acute inhalation toxicity. 60% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 60% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

### 3. Composition/information on ingredients

**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Benzene		71-43-2	38 - 40
Methylene chloride	Dichloromethane	75-09-2	38 - 40
Acetonitrile		75-05-8	19 - 20
1,12-Benzoperylene		191-24-2	0.1
1,2,4-Trichlorobenzene		120-82-1	0.1
1,2:5,6-Dibenzanthracene		53-70-3	0.1
1,2-Benzanthracene		56-55-3	0.1
1,2-Dichlorobenzene		95-50-1	0.1
1,3-Dichlorobenzene		541-73-1	0.1
1,4-Dichlorobenzene		106-46-7	0.1
2,4-Dinitrotoluene		121-14-2	0.1
2,6-Dinitrotoluene		606-20-2	0.1
2-Chloronaphthalene		91-58-7	0.1
4-Bromophenyl phenyl ether		101-55-3	0.1
4-Chlorophenyl phenyl ether		7005-72-3	0.1
Acenaphthene		83-32-9	0.1
Acenaphthylene		208-96-8	0.1
Anthracene		120-12-7	0.1
Azobenzene		103-33-3	0.1
Benzo(a)pyrene		50-32-8	0.1
Benzo(b)fluoranthene		205-99-2	0.1
Benzo(k)fluoranthene		207-08-9	0.1

Chemical name	Common name and synonyms	CAS number	%
Bis(2-chloro-1-methylethyl) ether		108-60-1	0.1
Bis(2-chloroethoxy)methane		111-91-1	0.1
Bis(2-chloroethyl)ether		111-44-4	0.1
Bis(2-ethylhexyl)phthalate		117-81-7	0.1
Butyl benzyl phthalate		85-68-7	0.1
Chrysene		218-01-9	0.1
Diethyl phthalate		84-66-2	0.1
Dimethyl phthalate		131-11-3	0.1
Di-n-butyl phthalate		84-74-2	0.1
Di-n-octyl phthalate		117-84-0	0.1
Fluoranthene		206-44-0	0.1
Fluorene		86-73-7	0.1
Hexachloro-1,3-butadiene		87-68-3	0.1
Hexachlorobenzene		118-74-1	0.1
Hexachlorocyclopentadiene		77-47-4	0.1
Hexachloroethane		67-72-1	0.1
Indeno(1,2,3-C,D)pyrene		193-39-5	0.1
Isophorone		78-59-1	0.1
Naphthalene		91-20-3	0.1
Nitrobenzene		98-95-3	0.1
N-Nitrosodimethylamine		62-75-9	0.1
N-Nitrosodi-n-propylamine		621-64-7	0.1
N-Nitrosodiphenylamine		86-30-6	0.1
Phenanthrene		85-01-8	0.1
Pyrene		129-00-0	0.1

#### 4. First-aid measures

##### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

##### Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

##### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

##### Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

##### Most important symptoms/effects, acute and delayed

Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

##### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

##### General information

Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

#### 5. Fire-fighting measures

##### Suitable extinguishing media

Water fog. Alcohol resistant foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Highly flammable liquid and vapor.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapors or spray mist. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.  Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe vapors or spray mist. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

### Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm
Methylene chloride (CAS 75-09-2)	STEL	125 ppm
	TWA	25 ppm

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
1,2-Dichlorobenzene (CAS 95-50-1)	Ceiling	300 mg/m <sup>3</sup>
		50 ppm
1,4-Dichlorobenzene (CAS 106-46-7)	PEL	450 mg/m <sup>3</sup>
		75 ppm
2,4-Dinitrotoluene (CAS 121-14-2)	PEL	1.5 mg/m <sup>3</sup>
2,6-Dinitrotoluene (CAS 606-20-2)	PEL	1.5 mg/m <sup>3</sup>
4-Chlorophenyl phenyl ether (CAS 7005-72-3)	PEL	0.5 mg/m <sup>3</sup>
Acetonitrile (CAS 75-05-8)	PEL	70 mg/m <sup>3</sup>
		40 ppm
Bis(2-chloroethyl)ether (CAS 111-44-4)	Ceiling	90 mg/m <sup>3</sup>
		15 ppm
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	PEL	5 mg/m <sup>3</sup>

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Dimethyl phthalate (CAS 131-11-3)	PEL	5 mg/m <sup>3</sup>
Di-n-butyl phthalate (CAS 84-74-2)	PEL	5 mg/m <sup>3</sup>
Hexachloroethane (CAS 67-72-1)	PEL	10 mg/m <sup>3</sup>
Isophorone (CAS 78-59-1)	PEL	1 ppm 140 mg/m <sup>3</sup> 25 ppm
Naphthalene (CAS 91-20-3)	PEL	50 mg/m <sup>3</sup> 10 ppm
Nitrobenzene (CAS 98-95-3)	PEL	5 mg/m <sup>3</sup> 1 ppm

**US. OSHA Table Z-2 (29 CFR 1910.1000)**

Components	Type	Value
Benzene (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value
1,2,4-Trichlorobenzene (CAS 120-82-1)	Ceiling	5 ppm
1,2-Dichlorobenzene (CAS 95-50-1)	STEL	50 ppm
	TWA	25 ppm
1,4-Dichlorobenzene (CAS 106-46-7)	TWA	10 ppm
2,4-Dinitrotoluene (CAS 121-14-2)	TWA	0.2 mg/m <sup>3</sup>
2,6-Dinitrotoluene (CAS 606-20-2)	TWA	0.2 mg/m <sup>3</sup>
Acetonitrile (CAS 75-05-8)	TWA	20 ppm
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Bis(2-chloroethyl)ether (CAS 111-44-4)	STEL	10 ppm
	TWA	5 ppm
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	TWA	5 mg/m <sup>3</sup>
Diethyl phthalate (CAS 84-66-2)	TWA	5 mg/m <sup>3</sup>
Dimethyl phthalate (CAS 131-11-3)	TWA	5 mg/m <sup>3</sup>
Di-n-butyl phthalate (CAS 84-74-2)	TWA	5 mg/m <sup>3</sup>
Hexachloro-1,3-butadiene (CAS 87-68-3)	TWA	0.02 ppm
Hexachlorobenzene (CAS 118-74-1)	TWA	0.002 mg/m <sup>3</sup>
Hexachlorocyclopentadiene (CAS 77-47-4)	TWA	0.01 ppm
Hexachloroethane (CAS 67-72-1)	TWA	1 ppm
Isophorone (CAS 78-59-1)	Ceiling	5 ppm
Methylene chloride (CAS 75-09-2)	TWA	50 ppm
Naphthalene (CAS 91-20-3)	TWA	10 ppm
Nitrobenzene (CAS 98-95-3)	TWA	1 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
1,2,4-Trichlorobenzene (CAS 120-82-1)	Ceiling	40 mg/m3
1,2-Dichlorobenzene (CAS 95-50-1)	Ceiling	5 ppm
		300 mg/m3
2,4-Dinitrotoluene (CAS 121-14-2)	TWA	50 ppm 1.5 mg/m3
2,6-Dinitrotoluene (CAS 606-20-2)	TWA	1.5 mg/m3
4-Chlorophenyl phenyl ether (CAS 7005-72-3)	TWA	0.5 mg/m3
Acetonitrile (CAS 75-05-8)	TWA	34 mg/m3
		20 ppm
Benzene (CAS 71-43-2)	STEL	1 ppm
	TWA	0.1 ppm
Bis(2-chloroethyl)ether (CAS 111-44-4)	STEL	60 mg/m3
	TWA	10 ppm 30 mg/m3
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	STEL	5 ppm 10 mg/m3
	TWA	5 mg/m3
Diethyl phthalate (CAS 84-66-2)	TWA	5 mg/m3
Dimethyl phthalate (CAS 131-11-3)	TWA	5 mg/m3
Di-n-butyl phthalate (CAS 84-74-2)	TWA	5 mg/m3
Hexachloro-1,3-butadiene (CAS 87-68-3)	TWA	0.24 mg/m3
Hexachlorocyclopentadiene (CAS 77-47-4)	TWA	0.02 ppm
		0.1 mg/m3
Hexachloroethane (CAS 67-72-1)	TWA	0.01 ppm
		10 mg/m3
Isophorone (CAS 78-59-1)	TWA	1 ppm
		23 mg/m3
Naphthalene (CAS 91-20-3)	STEL	4 ppm 75 mg/m3
	TWA	15 ppm 50 mg/m3
Nitrobenzene (CAS 98-95-3)	TWA	10 ppm
		5 mg/m3
		1 ppm

**Biological limit values**
**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	*
Methylene chloride (CAS 75-09-2)	0.3 mg/l	Dichloromethane	Urine	*
Nitrobenzene (CAS 98-95-3)	1.5 %	Methemoglobin	Hemoglobin in blood	*

\* - For sampling details, please see the source document.

## Exposure guidelines

### US - California OELs: Skin designation

1,2-Dichlorobenzene (CAS 95-50-1)	Can be absorbed through the skin.
2,4-Dinitrotoluene (CAS 121-14-2)	Can be absorbed through the skin.
2,6-Dinitrotoluene (CAS 606-20-2)	Can be absorbed through the skin.
Acetonitrile (CAS 75-05-8)	Can be absorbed through the skin.
Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Bis(2-chloroethyl)ether (CAS 111-44-4)	Can be absorbed through the skin.
Hexachloro-1,3-butadiene (CAS 87-68-3)	Can be absorbed through the skin.
Hexachlorobenzene (CAS 118-74-1)	Can be absorbed through the skin.
Hexachloroethane (CAS 67-72-1)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.
Nitrobenzene (CAS 98-95-3)	Can be absorbed through the skin.

### US - Minnesota Haz Subs: Skin designation applies

2,4-Dinitrotoluene (CAS 121-14-2)	Skin designation applies.
2,6-Dinitrotoluene (CAS 606-20-2)	Skin designation applies.
Acetonitrile (CAS 75-05-8)	Skin designation applies.
Bis(2-chloroethyl)ether (CAS 111-44-4)	Skin designation applies.
Hexachlorobenzene (CAS 118-74-1)	Skin designation applies.
Hexachloroethane (CAS 67-72-1)	Skin designation applies.
Nitrobenzene (CAS 98-95-3)	Skin designation applies.

### US - Tennessee OELs: Skin designation

2,4-Dinitrotoluene (CAS 121-14-2)	Can be absorbed through the skin.
2,6-Dinitrotoluene (CAS 606-20-2)	Can be absorbed through the skin.
Bis(2-chloroethyl)ether (CAS 111-44-4)	Can be absorbed through the skin.
Hexachloroethane (CAS 67-72-1)	Can be absorbed through the skin.
Nitrobenzene (CAS 98-95-3)	Can be absorbed through the skin.

### US ACGIH Threshold Limit Values: Skin designation

2,4-Dinitrotoluene (CAS 121-14-2)	Can be absorbed through the skin.
2,6-Dinitrotoluene (CAS 606-20-2)	Can be absorbed through the skin.
Acetonitrile (CAS 75-05-8)	Can be absorbed through the skin.
Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Bis(2-chloroethyl)ether (CAS 111-44-4)	Can be absorbed through the skin.
Hexachloro-1,3-butadiene (CAS 87-68-3)	Can be absorbed through the skin.
Hexachlorobenzene (CAS 118-74-1)	Can be absorbed through the skin.
Hexachloroethane (CAS 67-72-1)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.
Nitrobenzene (CAS 98-95-3)	Can be absorbed through the skin.
N-Nitrosodimethylamine (CAS 62-75-9)	Can be absorbed through the skin.

### US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2,4-Dinitrotoluene (CAS 121-14-2)	Can be absorbed through the skin.
2,6-Dinitrotoluene (CAS 606-20-2)	Can be absorbed through the skin.
Bis(2-chloroethyl)ether (CAS 111-44-4)	Can be absorbed through the skin.
Hexachloro-1,3-butadiene (CAS 87-68-3)	Can be absorbed through the skin.
Hexachloroethane (CAS 67-72-1)	Can be absorbed through the skin.
Nitrobenzene (CAS 98-95-3)	Can be absorbed through the skin.

### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2,4-Dinitrotoluene (CAS 121-14-2)	Can be absorbed through the skin.
2,6-Dinitrotoluene (CAS 606-20-2)	Can be absorbed through the skin.
Bis(2-chloroethyl)ether (CAS 111-44-4)	Can be absorbed through the skin.
Hexachloroethane (CAS 67-72-1)	Can be absorbed through the skin.
Nitrobenzene (CAS 98-95-3)	Can be absorbed through the skin.

### Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Chemical respirator with organic vapor cartridge and full facepiece.

#### Skin protection

**Hand protection** Wear appropriate chemical resistant gloves.



<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Chemical respirator with organic vapor cartridge and full facepiece.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Observe any medical surveillance requirements. When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Not available.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	-139 °F (-95 °C) estimated
<b>Initial boiling point and boiling range</b>	103.55 °F (39.75 °C) estimated
<b>Flash point</b>	12.0 °F (-11.1 °C) estimated
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.

### Upper/lower flammability or explosive limits

<b>Flammability limit - lower (%)</b>	1.4 % estimated
<b>Flammability limit - upper (%)</b>	66.4 % estimated
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	306.24 hPa estimated
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	928 °F (497.78 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

### Other information

<b>Density</b>	1.04599 g/cm <sup>3</sup> estimated
<b>Explosive properties</b>	Not explosive.
<b>Flammability class</b>	Flammable IB estimated
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	100.7 % estimated
<b>Specific gravity</b>	1.05 estimated
<b>VOC</b>	101 % estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Fatal if inhaled. May cause damage to organs by inhalation. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
<b>Skin contact</b>	Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Toxic if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics** Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

**Acute toxicity** Fatal if inhaled. May be fatal if swallowed and enters airways. Toxic in contact with skin.

Components	Species	Test Results
1,2,4-Trichlorobenzene (CAS 120-82-1)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	756 mg/kg
1,2-Dichlorobenzene (CAS 95-50-1)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	1516 mg/kg
1,3-Dichlorobenzene (CAS 541-73-1)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	580 mg/kg
1,4-Dichlorobenzene (CAS 106-46-7)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rat	> 2000 mg/kg, 24 Hours
<b>Oral</b>		
LD50	Rat	500 mg/kg
2,4-Dinitrotoluene (CAS 121-14-2)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	268 mg/kg
2,6-Dinitrotoluene (CAS 606-20-2)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	177 mg/kg
2-Chloronaphthalene (CAS 91-58-7)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	2078 mg/kg

Components	Species	Test Results
Anthracene (CAS 120-12-7)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rat	> 1320 mg/kg, 24 Hours
Benzene (CAS 71-43-2)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	690 - 1230 mg/kg
Benzo(a)pyrene (CAS 50-32-8)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rat	> 2000 mg/kg
<b>Oral</b>		
LD50	Rat	725 mg/kg
Bis(2-chloro-1-methylethyl) ether (CAS 108-60-1)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	220 - 270 mg/kg
Bis(2-chloroethoxy)methane (CAS 111-91-1)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rat	1000 - 2000 mg/kg, 24 Hours
<b>Oral</b>		
LD50	Rat	50 - 300 mg/kg
Butyl benzyl phthalate (CAS 85-68-7)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	2330 mg/kg
Dimethyl phthalate (CAS 131-11-3)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	2400 mg/kg
Di-n-butyl phthalate (CAS 84-74-2)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rabbit	4200 mg/kg
<b>Inhalation</b>		
LC50	Rat	15.68 mg/l, 4 Hours
Fluoranthene (CAS 206-44-0)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rabbit	3180 mg/kg
Hexachloro-1,3-butadiene (CAS 87-68-3)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	90 mg/kg
Hexachlorobenzene (CAS 118-74-1)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	3500 mg/kg

Components	Species	Test Results
Hexachlorocyclopentadiene (CAS 77-47-4)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Rat	0.0181 mg/l, 4 Hours
Hexachloroethane (CAS 67-72-1)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	4460 mg/kg
Isophorone (CAS 78-59-1)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	1200 mg/kg, 24 Hours
<b>Inhalation</b>		
LC50	Rat	7 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	1000 mg/kg
Methylene chloride (CAS 75-09-2)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rat	> 2000 mg/kg, Days
<b>Oral</b>		
LD50	Rat	1600 mg/kg
Naphthalene (CAS 91-20-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2 g/kg
<b>Oral</b>		
LD50	Rat	490 mg/kg
Nitrobenzene (CAS 98-95-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	760 mg/kg, 24 Hours
N-Nitrosodimethylamine (CAS 62-75-9)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	27 mg/kg
N-Nitrosodi-n-propylamine (CAS 621-64-7)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	480 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** May cause genetic defects.

**Carcinogenicity** May cause cancer.

## IARC Monographs. Overall Evaluation of Carcinogenicity

1,12-Benzoperylene (CAS 191-24-2)	3 Not classifiable as to carcinogenicity to humans.
1,2:5,6-Dibenzanthracene (CAS 53-70-3)	2A Probably carcinogenic to humans.
1,2-Benzanthracene (CAS 56-55-3)	2B Possibly carcinogenic to humans.
1,2-Dichlorobenzene (CAS 95-50-1)	3 Not classifiable as to carcinogenicity to humans.
1,3-Dichlorobenzene (CAS 541-73-1)	3 Not classifiable as to carcinogenicity to humans.
1,4-Dichlorobenzene (CAS 106-46-7)	2B Possibly carcinogenic to humans.
2,4-Dinitrotoluene (CAS 121-14-2)	2B Possibly carcinogenic to humans.
2,6-Dinitrotoluene (CAS 606-20-2)	2B Possibly carcinogenic to humans.
Acenaphthene (CAS 83-32-9)	3 Not classifiable as to carcinogenicity to humans.
Anthracene (CAS 120-12-7)	3 Not classifiable as to carcinogenicity to humans.
Azobenzene (CAS 103-33-3)	3 Not classifiable as to carcinogenicity to humans.
Benzene (CAS 71-43-2)	1 Carcinogenic to humans.
Benzo(a)pyrene (CAS 50-32-8)	1 Carcinogenic to humans.
Benzo(b)fluoranthene (CAS 205-99-2)	2B Possibly carcinogenic to humans.
Benzo(k)fluoranthene (CAS 207-08-9)	2B Possibly carcinogenic to humans.
Bis(2-chloro-1-methylethyl) ether (CAS 108-60-1)	3 Not classifiable as to carcinogenicity to humans.
Bis(2-chloroethyl)ether (CAS 111-44-4)	3 Not classifiable as to carcinogenicity to humans.
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	2B Possibly carcinogenic to humans.
Butyl benzyl phthalate (CAS 85-68-7)	3 Not classifiable as to carcinogenicity to humans.
Chrysene (CAS 218-01-9)	2B Possibly carcinogenic to humans.
Fluoranthene (CAS 206-44-0)	3 Not classifiable as to carcinogenicity to humans.
Fluorene (CAS 86-73-7)	3 Not classifiable as to carcinogenicity to humans.
Hexachloro-1,3-butadiene (CAS 87-68-3)	3 Not classifiable as to carcinogenicity to humans.
Hexachlorobenzene (CAS 118-74-1)	2B Possibly carcinogenic to humans.
Hexachloroethane (CAS 67-72-1)	2B Possibly carcinogenic to humans.
Indeno(1,2,3-C,D)pyrene (CAS 193-39-5)	2B Possibly carcinogenic to humans.
Methylene chloride (CAS 75-09-2)	2A Probably carcinogenic to humans.
Naphthalene (CAS 91-20-3)	2B Possibly carcinogenic to humans.
Nitrobenzene (CAS 98-95-3)	2B Possibly carcinogenic to humans.
N-Nitrosodimethylamine (CAS 62-75-9)	2A Probably carcinogenic to humans.
N-Nitrosodi-n-propylamine (CAS 621-64-7)	2B Possibly carcinogenic to humans.
N-Nitrosodiphenylamine (CAS 86-30-6)	3 Not classifiable as to carcinogenicity to humans.
Phenanthrene (CAS 85-01-8)	3 Not classifiable as to carcinogenicity to humans.
Pyrene (CAS 129-00-0)	3 Not classifiable as to carcinogenicity to humans.

## OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2)	Cancer
Methylene chloride (CAS 75-09-2)	Cancer
N-Nitrosodimethylamine (CAS 62-75-9)	Cancer

## US. National Toxicology Program (NTP) Report on Carcinogens

1,2:5,6-Dibenzanthracene (CAS 53-70-3)	Reasonably Anticipated to be a Human Carcinogen.
1,2-Benzanthracene (CAS 56-55-3)	Reasonably Anticipated to be a Human Carcinogen.
1,4-Dichlorobenzene (CAS 106-46-7)	Reasonably Anticipated to be a Human Carcinogen.
Benzene (CAS 71-43-2)	Known To Be Human Carcinogen.
Benzo(a)pyrene (CAS 50-32-8)	Reasonably Anticipated to be a Human Carcinogen.
Benzo(b)fluoranthene (CAS 205-99-2)	Reasonably Anticipated to be a Human Carcinogen.
Benzo(k)fluoranthene (CAS 207-08-9)	Reasonably Anticipated to be a Human Carcinogen.
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	Reasonably Anticipated to be a Human Carcinogen.
Hexachlorobenzene (CAS 118-74-1)	Reasonably Anticipated to be a Human Carcinogen.
Hexachloroethane (CAS 67-72-1)	Reasonably Anticipated to be a Human Carcinogen.
Indeno(1,2,3-C,D)pyrene (CAS 193-39-5)	Reasonably Anticipated to be a Human Carcinogen.
Methylene chloride (CAS 75-09-2)	Reasonably Anticipated to be a Human Carcinogen.
Naphthalene (CAS 91-20-3)	Reasonably Anticipated to be a Human Carcinogen.
Nitrobenzene (CAS 98-95-3)	Reasonably Anticipated to be a Human Carcinogen.
N-Nitrosodimethylamine (CAS 62-75-9)	Reasonably Anticipated to be a Human Carcinogen.
N-Nitrosodi-n-propylamine (CAS 621-64-7)	Reasonably Anticipated to be a Human Carcinogen.

**Reproductive toxicity** May cause harm to breastfed babies. May damage fertility or the unborn child.

**Specific target organ toxicity - single exposure** Causes damage to organs. May cause drowsiness and dizziness.

**Specific target organ toxicity - repeated exposure** Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard** May be fatal if swallowed and enters airways.

**Chronic effects**

Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

**12. Ecological information****Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
1,2,4-Trichlorobenzene (CAS 120-82-1)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	3.1 - 3.69 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	1.35 - 1.73 mg/l, 96 hours
1,2-Dichlorobenzene (CAS 95-50-1)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.74 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	1.58 mg/l, 96 hours
1,3-Dichlorobenzene (CAS 541-73-1)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	1.2 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	3.9 - 6.2 mg/l, 96 hours
1,4-Dichlorobenzene (CAS 106-46-7)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.0007 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	1.12 mg/l, 96 hours
2,4-Dinitrotoluene (CAS 121-14-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	22.5 - 30.5 mg/l, 48 hours
Fish	LC50	Zebra danio (Danio rerio)	10 - 60 mg/l, 96 hours
2,6-Dinitrotoluene (CAS 606-20-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	21.7 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	17.2 - 20.2 mg/l, 96 hours
4-Bromophenyl phenyl ether (CAS 101-55-3)			
<b>Aquatic</b>			
Fish	LC50	Bluegill (Lepomis macrochirus)	4 - 6.1 mg/l, 96 hours
4-Chlorophenyl phenyl ether (CAS 7005-72-3)			
<b>Aquatic</b>			
Fish	LC50	Brook trout (Salvelinus fontinalis)	0.65 - 0.82 mg/l, 96 hours
Acenaphthene (CAS 83-32-9)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	1.102 - 1.475 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0.52 - 0.71 mg/l, 96 hours
Acetonitrile (CAS 75-05-8)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Anthracene (CAS 120-12-7)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.081 - 0.112 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.0045 mg/l, 96 hours

Components	Species		Test Results
Benzene (CAS 71-43-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	8.76 - 15.6 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	7.2 - 11.7 mg/l, 96 hours
Bis(2-chloroethoxy)methane (CAS 111-91-1)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	155 - 217 mg/l, 96 hours
Bis(2-chloroethyl)ether (CAS 111-44-4)			
<b>Aquatic</b>			
Fish	LC50	Bluegill (Lepomis macrochirus)	600 mg/l, 96 hours
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia pulex)	0.133 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 0.2 mg/l, 96 hours > 0.2 mg/l, 96 hours
Butyl benzyl phthalate (CAS 85-68-7)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	> 0.96 mg/l, 48 hours
Fish	LC50	Shiner perch (Cymatogaster aggregata)	0.47 - 0.56 mg/l, 96 hours
Diethyl phthalate (CAS 84-66-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	86 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	12 mg/l, 96 hours
Dimethyl phthalate (CAS 131-11-3)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	45.9 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	29 mg/l, 96 hours
Di-n-butyl phthalate (CAS 84-74-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	2.99 mg/l, 48 hours
Fish	LC50	Channel catfish (Ictalurus punctatus)	0.4 - 0.53 mg/l, 96 hours
Fluoranthene (CAS 206-44-0)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	0.0054 - 0.0085 mg/l, 96 hours
Fluorene (CAS 86-73-7)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia pulex)	0.212 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.55 - 1.21 mg/l, 96 hours
Hexachloro-1,3-butadiene (CAS 87-68-3)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	0.09 - 0.11 mg/l, 96 hours
Hexachlorobenzene (CAS 118-74-1)			
<b>Aquatic</b>			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1 mg/l, 96 hours

Components	Species	Test Results
Hexachlorocyclopentadiene (CAS 77-47-4)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 0.007 mg/l, 96 hours
Hexachloroethane (CAS 67-72-1)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 1.6 - 2.1 mg/l, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> ) 0.73 - 1.28 mg/l, 96 hours
Isophorone (CAS 78-59-1)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 132 - 159 mg/l, 96 hours
Methylene chloride (CAS 75-09-2)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 1250 mg/l, 48 hours
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 140.8 - 277.8 mg/l, 96 hours
Naphthalene (CAS 91-20-3)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 1.09 - 3.4 mg/l, 48 hours
Fish	LC50	Pink salmon ( <i>Oncorhynchus gorboscha</i> ) 1.11 - 1.68 mg/l, 96 hours
Nitrobenzene (CAS 98-95-3)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 25.6 - 42 mg/l, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> ) 36 - 49 mg/l, 96 hours
N-Nitrosodimethylamine (CAS 62-75-9)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 832 - 1062 mg/l, 96 hours
N-Nitrosodiphenylamine (CAS 86-30-6)		
<b>Aquatic</b>		
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> ) 4.8 - 7.6 mg/l, 96 hours
Phenanthrene (CAS 85-01-8)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 0.185 - 0.243 mg/l, 48 hours
Fish	LC50	Sheepshead minnow ( <i>Cyprinodon variegatus</i> ) 0.438 - 0.523 mg/l, 96 hours
Pyrene (CAS 129-00-0)		
<b>Aquatic</b>		
Fish	LC50	Rainbow trout, donaldson trout ( <i>Oncorhynchus mykiss</i> ) > 2 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

#### Persistence and degradability

#### Bioaccumulative potential

##### Partition coefficient n-octanol / water (log Kow)

1,12-Benzoperylene	6.63
1,2,4-Trichlorobenzene	4.02
1,2:5,6-Dibenzanthracene	6.5
1,2-Benzanthracene	5.79
1,2-Dichlorobenzene	3.43
1,3-Dichlorobenzene	3.53
1,4-Dichlorobenzene	3.44
2,4-Dinitrotoluene	1.98
2,6-Dinitrotoluene	2.1
2-Chloronaphthalene	3.9
4-Chlorophenyl phenyl ether	4.08



**Partition coefficient n-octanol / water (log Kow)**

Acenaphthene	3.92
Acenaphthylene	4.07
Acetonitrile	-0.34
Anthracene	4.45
Azobenzene	3.82
Benzene	2.13
Benzo(a)pyrene	5.97
Benzo(b)fluoranthene	6.6
Benzo(k)fluoranthene	6.84
Bis(2-chloro-1-methylethyl) ether	2.48
Bis(2-chloroethoxy)methane	0.75
Bis(2-chloroethyl)ether	1.29
Bis(2-ethylhexyl)phthalate	7.6
Butyl benzyl phthalate	4.91
Chrysene	5.73
Diethyl phthalate	2.47
Dimethyl phthalate	1.6
Di-n-butyl phthalate	4.9
Di-n-octyl phthalate	8.1
Fluoranthene	5.16
Hexachloro-1,3-butadiene	4.78
Hexachlorobenzene	5.73
Hexachlorocyclopentadiene	3.99
Hexachloroethane	4.14
Isophorone	1.7
Methylene chloride	1.25
Naphthalene	3.3
Nitrobenzene	1.85
N-Nitrosodimethylamine	-0.57
N-Nitrosodi-n-propylamine	1.36
N-Nitrosodiphenylamine	3.13
Phenanthrene	4.57
Pyrene	4.88

**Mobility in soil** No data available.

**Other adverse effects** The product contains volatile organic compounds which have a photochemical ozone creation potential.

**13. Disposal considerations**

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**US RCRA Hazardous Waste P List: Reference**

N-Nitrosodimethylamine (CAS 62-75-9) P082

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

<b>DOT</b>	
<b>UN number</b>	UN1992
<b>UN proper shipping name</b>	Flammable liquids, toxic, n.o.s. (Benzene RQ = 25 LBS, Methylene chloride RQ = 2500 LBS) (1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	6.1(PGI, II)

<b>Label(s)</b>	3, 6.1
<b>Packing group</b>	II
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB2, T7, TP2, TP13
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	243

**IATA**

<b>UN number</b>	UN1992
<b>UN proper shipping name</b>	Flammable liquid, toxic, n.o.s. (Benzene, Methylene chloride)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	6.1(PGI, II)
<b>Packing group</b>	II
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	3HP
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

**IMDG**

<b>UN number</b>	UN1992
<b>UN proper shipping name</b>	FLAMMABLE LIQUID, TOXIC, N.O.S. (Benzene, Methylene chloride) (1,2,4-Trichlorobenzene, Hexachloro-1,3-butadiene)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	6.1(PGI, II)
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-E, S-D
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
1,2,4-Trichlorobenzene	
Hexachloro-1,3-butadiene	

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**DOT**



**IATA; IMDG**



**15. Regulatory information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

4-Bromophenyl phenyl ether (CAS 101-55-3)	1.0 % One-Time Export Notification only.
Bis(2-chloro-1-methylethyl) ether (CAS 108-60-1)	1.0 % One-Time Export Notification only.
Bis(2-chloroethyl)ether (CAS 111-44-4)	1.0 % One-Time Export Notification only.

**TSCA Chemical Action Plans, Chemicals of Concern**

Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	Phthalates Action Plan
Butyl benzyl phthalate (CAS 85-68-7)	Phthalates Action Plan
Diethyl phthalate (CAS 84-66-2)	Phthalates Action Plan
Dimethyl phthalate (CAS 131-11-3)	Phthalates Action Plan
Di-n-butyl phthalate (CAS 84-74-2)	Phthalates Action Plan
Di-n-octyl phthalate (CAS 117-84-0)	Phthalates Action Plan

**CERCLA Hazardous Substance List (40 CFR 302.4)**

1,12-Benzoperylene (CAS 191-24-2)	Listed.
1,2,4-Trichlorobenzene (CAS 120-82-1)	Listed.
1,2:5,6-Dibenzanthracene (CAS 53-70-3)	Listed.
1,2-Benzanthracene (CAS 56-55-3)	Listed.
1,2-Dichlorobenzene (CAS 95-50-1)	Listed.
1,3-Dichlorobenzene (CAS 541-73-1)	Listed.
1,4-Dichlorobenzene (CAS 106-46-7)	Listed.
2,4-Dinitrotoluene (CAS 121-14-2)	Listed.
2,6-Dinitrotoluene (CAS 606-20-2)	Listed.
2-Chloronaphthalene (CAS 91-58-7)	Listed.
4-Bromophenyl phenyl ether (CAS 101-55-3)	Listed.
4-Chlorophenyl phenyl ether (CAS 7005-72-3)	Listed.
Acenaphthene (CAS 83-32-9)	Listed.
Acenaphthylene (CAS 208-96-8)	Listed.
Acetonitrile (CAS 75-05-8)	Listed.
Anthracene (CAS 120-12-7)	Listed.
Azobenzene (CAS 103-33-3)	Listed.
Benzene (CAS 71-43-2)	Listed.
Benzo(a)pyrene (CAS 50-32-8)	Listed.
Benzo(b)fluoranthene (CAS 205-99-2)	Listed.
Benzo(k)fluoranthene (CAS 207-08-9)	Listed.
Bis(2-chloro-1-methylethyl) ether (CAS 108-60-1)	Listed.
Bis(2-chloroethoxy)methane (CAS 111-91-1)	Listed.
Bis(2-chloroethyl)ether (CAS 111-44-4)	Listed.
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	Listed.
Butyl benzyl phthalate (CAS 85-68-7)	Listed.
Chrysene (CAS 218-01-9)	Listed.
Diethyl phthalate (CAS 84-66-2)	Listed.
Dimethyl phthalate (CAS 131-11-3)	Listed.
Di-n-butyl phthalate (CAS 84-74-2)	Listed.
Di-n-octyl phthalate (CAS 117-84-0)	Listed.
Fluoranthene (CAS 206-44-0)	Listed.
Fluorene (CAS 86-73-7)	Listed.
Hexachloro-1,3-butadiene (CAS 87-68-3)	Listed.
Hexachlorobenzene (CAS 118-74-1)	Listed.
Hexachlorocyclopentadiene (CAS 77-47-4)	Listed.
Hexachloroethane (CAS 67-72-1)	Listed.
Indeno(1,2,3-C,D)pyrene (CAS 193-39-5)	Listed.
Isophorone (CAS 78-59-1)	Listed.
Methylene chloride (CAS 75-09-2)	Listed.
Naphthalene (CAS 91-20-3)	Listed.
Nitrobenzene (CAS 98-95-3)	Listed.
N-Nitrosodimethylamine (CAS 62-75-9)	Listed.
N-Nitrosodi-n-propylamine (CAS 621-64-7)	Listed.
N-Nitrosodiphenylamine (CAS 86-30-6)	Listed.
Phenanthrene (CAS 85-01-8)	Listed.
Pyrene (CAS 129-00-0)	Listed.

**SARA 304 Emergency release notification**

Bis(2-chloroethyl)ether (CAS 111-44-4)	10 LBS
Hexachlorocyclopentadiene (CAS 77-47-4)	10 LBS
Nitrobenzene (CAS 98-95-3)	1000 LBS
N-Nitrosodimethylamine (CAS 62-75-9)	10 LBS
Pyrene (CAS 129-00-0)	5000 LBS

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Benzene (CAS 71-43-2)	Cancer
Methylene chloride (CAS 75-09-2)	Cancer
N-Nitrosodimethylamine (CAS 62-75-9)	Cancer
Benzene (CAS 71-43-2)	Central nervous system
Methylene chloride (CAS 75-09-2)	Heart
N-Nitrosodimethylamine (CAS 62-75-9)	Liver
Benzene (CAS 71-43-2)	Blood
Methylene chloride (CAS 75-09-2)	Central nervous system
N-Nitrosodimethylamine (CAS 62-75-9)	Acute toxicity
Benzene (CAS 71-43-2)	Aspiration
Methylene chloride (CAS 75-09-2)	Liver
Benzene (CAS 71-43-2)	Skin
Methylene chloride (CAS 75-09-2)	Skin irritation
Benzene (CAS 71-43-2)	Eye
Methylene chloride (CAS 75-09-2)	Eye irritation
Benzene (CAS 71-43-2)	respiratory tract irritation
	Flammability

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - Yes
	Pressure Hazard - No
	Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Bis(2-chloroethyl)ether	111-44-4	10	10000		
Hexachlorocyclopentadiene	77-47-4	10	100		
Nitrobenzene	98-95-3	1000	10000		
N-Nitrosodimethylamine	62-75-9	10	1000		
Pyrene	129-00-0	5000		1000	10000

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
1,2:5,6-Dibenzanthracene	53-70-3	0.1
1,2-Benzanthracene	56-55-3	0.1
1,4-Dichlorobenzene	106-46-7	0.1
2,4-Dinitrotoluene	121-14-2	0.1
2,6-Dinitrotoluene	606-20-2	0.1
Acetonitrile	75-05-8	19 - 20
Benzene	71-43-2	38 - 40
Benzo(a)pyrene	50-32-8	0.1
Benzo(b)fluoranthene	205-99-2	0.1
Benzo(k)fluoranthene	207-08-9	0.1
Bis(2-ethylhexyl)phthalate	117-81-7	0.1
Hexachlorobenzene	118-74-1	0.1
Hexachloroethane	67-72-1	0.1
Indeno(1,2,3-C,D)pyrene	193-39-5	0.1
Methylene chloride	75-09-2	38 - 40
Naphthalene	91-20-3	0.1

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Nitrobenzene	98-95-3	0.1
N-Nitrosodimethylamine	62-75-9	0.1
N-Nitrosodi-n-propylamine	621-64-7	0.1

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

1,12-Benzoperylene (CAS 191-24-2)  
 1,2,4-Trichlorobenzene (CAS 120-82-1)  
 1,2:5,6-Dibenzanthracene (CAS 53-70-3)  
 1,2-Benzanthracene (CAS 56-55-3)  
 1,4-Dichlorobenzene (CAS 106-46-7)  
 2,4-Dinitrotoluene (CAS 121-14-2)  
 Acenaphthene (CAS 83-32-9)  
 Acenaphthylene (CAS 208-96-8)  
 Acetonitrile (CAS 75-05-8)  
 Anthracene (CAS 120-12-7)  
 Azobenzene (CAS 103-33-3)  
 Benzene (CAS 71-43-2)  
 Benzo(a)pyrene (CAS 50-32-8)  
 Benzo(b)fluoranthene (CAS 205-99-2)  
 Benzo(k)fluoranthene (CAS 207-08-9)  
 Bis(2-chloroethyl)ether (CAS 111-44-4)  
 Bis(2-ethylhexyl)phthalate (CAS 117-81-7)  
 Chrysene (CAS 218-01-9)  
 Dimethyl phthalate (CAS 131-11-3)  
 Di-n-butyl phthalate (CAS 84-74-2)  
 Fluoranthene (CAS 206-44-0)  
 Fluorene (CAS 86-73-7)  
 Hexachloro-1,3-butadiene (CAS 87-68-3)  
 Hexachlorobenzene (CAS 118-74-1)  
 Hexachlorocyclopentadiene (CAS 77-47-4)  
 Hexachloroethane (CAS 67-72-1)  
 Indeno(1,2,3-C,D)pyrene (CAS 193-39-5)  
 Isophorone (CAS 78-59-1)  
 Methylene chloride (CAS 75-09-2)  
 Naphthalene (CAS 91-20-3)  
 Nitrobenzene (CAS 98-95-3)  
 N-Nitrosodimethylamine (CAS 62-75-9)  
 N-Nitrosodiphenylamine (CAS 86-30-6)  
 Phenanthrene (CAS 85-01-8)  
 Pyrene (CAS 129-00-0)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Isophorone (CAS 78-59-1) Low priority

**US state regulations** WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

1,2:5,6-Dibenzanthracene (CAS 53-70-3) Listed: January 1, 1988  
 1,2-Benzanthracene (CAS 56-55-3) Listed: July 1, 1987  
 1,4-Dichlorobenzene (CAS 106-46-7) Listed: January 1, 1989  
 2,4-Dinitrotoluene (CAS 121-14-2) Listed: July 1, 1988  
 2,6-Dinitrotoluene (CAS 606-20-2) Listed: July 1, 1995  
 Azobenzene (CAS 103-33-3) Listed: January 1, 1990  
 Benzene (CAS 71-43-2) Listed: February 27, 1987  
 Benzo(a)pyrene (CAS 50-32-8) Listed: July 1, 1987  
 Benzo(b)fluoranthene (CAS 205-99-2) Listed: July 1, 1987  
 Benzo(k)fluoranthene (CAS 207-08-9) Listed: July 1, 1987  
 Bis(2-chloro-1-methylethyl) ether (CAS 108-60-1) Listed: October 29, 1999

Bis(2-chloroethyl)ether (CAS 111-44-4)	Listed: April 1, 1988
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	Listed: January 1, 1988
Chrysene (CAS 218-01-9)	Listed: January 1, 1990
Hexachloro-1,3-butadiene (CAS 87-68-3)	Listed: May 3, 2011
Hexachlorobenzene (CAS 118-74-1)	Listed: October 1, 1987
Hexachloroethane (CAS 67-72-1)	Listed: July 1, 1990
Indeno(1,2,3-C,D)pyrene (CAS 193-39-5)	Listed: January 1, 1988
Methylene chloride (CAS 75-09-2)	Listed: April 1, 1988
Naphthalene (CAS 91-20-3)	Listed: April 19, 2002
Nitrobenzene (CAS 98-95-3)	Listed: August 26, 1997
N-Nitrosodimethylamine (CAS 62-75-9)	Listed: October 1, 1987
N-Nitrosodi-n-propylamine (CAS 621-64-7)	Listed: January 1, 1988
N-Nitrosodiphenylamine (CAS 86-30-6)	Listed: April 1, 1988

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

Benzene (CAS 71-43-2)	Listed: December 26, 1997
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	Listed: October 24, 2003
Butyl benzyl phthalate (CAS 85-68-7)	Listed: December 2, 2005
Di-n-butyl phthalate (CAS 84-74-2)	Listed: December 2, 2005
Hexachlorobenzene (CAS 118-74-1)	Listed: January 1, 1989

**US - California Proposition 65 - CRT: Listed date/Female reproductive toxin**

2,4-Dinitrotoluene (CAS 121-14-2)	Listed: August 20, 1999
2,6-Dinitrotoluene (CAS 606-20-2)	Listed: August 20, 1999
Di-n-butyl phthalate (CAS 84-74-2)	Listed: December 2, 2005

**US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**

2,4-Dinitrotoluene (CAS 121-14-2)	Listed: August 20, 1999
2,6-Dinitrotoluene (CAS 606-20-2)	Listed: August 20, 1999
Benzene (CAS 71-43-2)	Listed: December 26, 1997
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	Listed: October 24, 2003
Di-n-butyl phthalate (CAS 84-74-2)	Listed: December 2, 2005
Nitrobenzene (CAS 98-95-3)	Listed: March 30, 2010

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

1,12-Benzoperylene (CAS 191-24-2)
1,2,4-Trichlorobenzene (CAS 120-82-1)
1,2:5,6-Dibenzanthracene (CAS 53-70-3)
1,2-Benzanthracene (CAS 56-55-3)
1,2-Dichlorobenzene (CAS 95-50-1)
1,3-Dichlorobenzene (CAS 541-73-1)
1,4-Dichlorobenzene (CAS 106-46-7)
2,4-Dinitrotoluene (CAS 121-14-2)
2,6-Dinitrotoluene (CAS 606-20-2)
2-Chloronaphthalene (CAS 91-58-7)
4-Bromophenyl phenyl ether (CAS 101-55-3)
4-Chlorophenyl phenyl ether (CAS 7005-72-3)
Acenaphthene (CAS 83-32-9)
Acenaphthylene (CAS 208-96-8)
Acetonitrile (CAS 75-05-8)
Anthracene (CAS 120-12-7)
Azobenzene (CAS 103-33-3)
Benzene (CAS 71-43-2)
Benzo(a)pyrene (CAS 50-32-8)
Benzo(b)fluoranthene (CAS 205-99-2)
Benzo(k)fluoranthene (CAS 207-08-9)
Bis(2-chloro-1-methylethyl) ether (CAS 108-60-1)
Bis(2-chloroethoxy)methane (CAS 111-91-1)
Bis(2-chloroethyl)ether (CAS 111-44-4)
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)
Butyl benzyl phthalate (CAS 85-68-7)
Chrysene (CAS 218-01-9)
Diethyl phthalate (CAS 84-66-2)
Dimethyl phthalate (CAS 131-11-3)
Di-n-butyl phthalate (CAS 84-74-2)
Di-n-octyl phthalate (CAS 117-84-0)
Fluoranthene (CAS 206-44-0)

Fluorene (CAS 86-73-7)  
 Hexachloro-1,3-butadiene (CAS 87-68-3)  
 Hexachloroethane (CAS 67-72-1)  
 Indeno(1,2,3-C,D)pyrene (CAS 193-39-5)  
 Isophorone (CAS 78-59-1)  
 Methylene chloride (CAS 75-09-2)  
 Naphthalene (CAS 91-20-3)  
 Nitrobenzene (CAS 98-95-3)  
 N-Nitrosodimethylamine (CAS 62-75-9)  
 N-Nitrosodi-n-propylamine (CAS 621-64-7)  
 N-Nitrosodiphenylamine (CAS 86-30-6)  
 Phenanthrene (CAS 85-01-8)  
 Pyrene (CAS 129-00-0)

#### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### 16. Other information, including date of preparation or last revision

Issue date	07-28-2014
Revision date	01-22-2021
Version #	02
NFPA ratings	Health: 4 Flammability: 3 Instability: 0

**Disclaimer**

Chem Service, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded SDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

Copyright © 2000-2014 Chem Service, Inc. All rights reserved except that this SDS may be printed for the use of a customer or prospective customer of Chem Service, Inc provided the entire SDS is printed. The SDS may not be placed in any database or otherwise stored or distributed in electronic or any other form.

This product is furnished FOR LABORATORY USE ONLY.

**Revision information**

This document has undergone significant changes and should be reviewed in its entirety.