

## 1. Identification

<b>Product identifier</b>	<b>Mixture #1-Base Neutrals</b>	
<b>Other means of identification</b>		
<b>Item</b>	M-PPHC1X5	
<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>	Not classified.	
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Acute toxicity, inhalation	Category 1
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity	Category 1
	Reproductive toxicity	Category 1
	Specific target organ toxicity, repeated exposure	Category 2
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. Fatal if inhaled. May cause cancer. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

<b>Response</b>	If swallowed: Call a poison center/doctor if you feel unwell. If on skin: Wash with plenty of water. 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). Rinse mouth. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	0.8% of the mixture consists of component(s) of unknown acute oral toxicity. 1.4% of the mixture consists of component(s) of unknown acute dermal toxicity. 98.6% of the mixture consists of component(s) of unknown acute inhalation toxicity. 98.4% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 98% 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	%
Methylene chloride	DICHLOROMETHANE; METHYLENE DICHLORIDE	75-09-2	97 - 100
4-Bromophenyl phenyl ether		101-55-3	0.2
4-Chlorophenyl phenyl ether		7005-72-3	0.2
Bis(2-chloro-1-methylethyl) ether		108-60-1	0.2
Bis(2-chloroethoxy)methane		111-91-1	0.2
Bis(2-chloroethyl)ether		111-44-4	0.2
Bis(2-ethylhexyl)phthalate		117-81-7	0.2
Butyl benzyl phthalate		85-68-7	0.2
Diethyl phthalate		84-66-2	0.2
Dimethyl phthalate		131-11-3	0.2
Di-n-butyl phthalate		84-74-2	0.2
Di-n-octyl phthalate		117-84-0	0.2
N-Nitrosodimethylamine		62-75-9	0.2
N-Nitrosodi-n-propylamine		621-64-7	0.2
N-Nitrosodiphenylamine		86-30-6	0.2

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	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.
<b>Skin contact</b>	Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Rinse mouth. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

<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>	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>	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>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapor. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up** Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: 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. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

## 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 breathe vapor. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Avoid contact with clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Do not empty into drains.

**Conditions for safe storage, including any incompatibilities** Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Components	Type	Value
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
4-Chlorophenyl phenyl ether (CAS 7005-72-3)	PEL	0.5 mg/m3
Bis(2-chloroethyl)ether (CAS 111-44-4)	Ceiling	90 mg/m3
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	PEL	15 ppm
Dimethyl phthalate (CAS 131-11-3)	PEL	5 mg/m3
Di-n-butyl phthalate (CAS 84-74-2)	PEL	5 mg/m3

**US. ACGIH Threshold Limit Values**

Components	Type	Value
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/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
Methylene chloride (CAS 75-09-2)	TWA	50 ppm

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

Components	Type	Value
4-Chlorophenyl phenyl ether (CAS 7005-72-3)	TWA	0.5 mg/m3
Bis(2-chloroethyl)ether (CAS 111-44-4)	STEL	60 mg/m3
	TWA	10 ppm 30 mg/m3 5 ppm
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	STEL	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

**Biological limit values**

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Methylene chloride (CAS 75-09-2)	0.3 mg/l	Dichloromethane	Urine	*

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

**Exposure guidelines**

**US - California OELs: Skin designation**

Bis(2-chloroethyl)ether (CAS 111-44-4) Can be absorbed through the skin.

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

Bis(2-chloroethyl)ether (CAS 111-44-4) Skin designation applies.

**US - Tennessee OELs: Skin designation**

Bis(2-chloroethyl)ether (CAS 111-44-4) Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

Bis(2-chloroethyl)ether (CAS 111-44-4) 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**

Bis(2-chloroethyl)ether (CAS 111-44-4) Can be absorbed through the skin.

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

Bis(2-chloroethyl)ether (CAS 111-44-4) Can be absorbed through the skin.

**Appropriate engineering controls**

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. Eye wash facilities and emergency shower must be available when handling this product.

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

**Eye/face protection** Wear eye/face protection. Wear safety glasses with side shields (or goggles).

**Skin protection**

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

**Other** Wear appropriate chemical resistant clothing.

<b>Respiratory protection</b>	Wear positive pressure self-contained breathing apparatus (SCBA).
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	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.

## 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>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	15.5 % 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>	579.97 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>	1033 °F (556.11 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	1.320187 g/cm3 estimated
<b>Percent volatile</b>	97.4 % estimated
<b>Specific gravity</b>	1.32 estimated
<b>VOC (Weight %)</b>	97.4 % 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>	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>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Fatal if inhaled. May cause damage to organs by inhalation.

**Skin contact** Harmful in contact with skin. Causes skin irritation.

**Eye contact** Causes serious eye irritation.

**Symptoms related to the physical, chemical and toxicological characteristics** Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**Information on toxicological effects**

**Acute toxicity** Fatal if inhaled. Harmful if swallowed. Harmful in contact with skin.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Bis(2-chloro-1-methylethyl) ether (CAS 108-60-1)		
<b>Acute</b>		
<i>Inhalation</i>		
LC17	Rat	1 mg/l, 4 Hours
LC50	Mouse	12.8 mg/l, 4 Hours
	Rat	350 mg/l, 8 Hours
<i>Oral</i>		
LD50	Mouse	296 mg/kg
	Rat	220 - 270 mg/kg
<i>Other</i>		
LD50	Rabbit	1.78 ml/kg
	Rat	> 2000 mg/kg
Bis(2-chloroethoxy)methane (CAS 111-91-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Guinea pig	170 mg/kg
<i>Inhalation</i>		
LC50	Guinea pig	60 - 120 ppm
	Rat	0.05 - 0.5 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	50 - 300 mg/kg
Bis(2-chloroethyl)ether (CAS 111-44-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Guinea pig	300 mg/kg
	Rabbit	9 mg/kg
<i>Inhalation</i>		
LC100	Rat	700 mg/l, 6 Hours
LC50	Guinea pig	35 - 105 ppm, 13 Hours
	Rat	1462 mg/m <sup>3</sup> , 4 Hours
		1000 mg/l, 45 Minutes
		250 ppm, 4 Hours
		0.33 mg/l, 4 Hours
<i>Oral</i>		
LD50	Mouse	136 mg/kg
	Rabbit	126 mg/kg
	Rat	75 mg/kg
<i>Other</i>		
LD50	Rabbit	0.3 ml/kg
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Guinea pig	10 g/kg
	Rabbit	25 g/kg
		20 ml/kg

Components	Species	Test Results
<i>Inhalation</i>		
LC50	Rat	> 600 mg/m3
<i>Oral</i>		
LD50	Guinea pig	26.3 g/kg
	Mouse	> 10000 mg/kg
	Rabbit	33900 mg/kg
		33.9 g/kg
	Rat	9800 mg/kg
<i>Other</i>		
LD50	Mouse	1060 mg/kg
	Rat	> 7.5 mg/kg
Butyl benzyl phthalate (CAS 85-68-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Mouse	6700 mg/kg
	Rabbit	> 10000 mg/kg
	Rat	6700 mg/kg
<i>Oral</i>		
LD50	Mouse	4170 mg/kg
	Rat	2330 mg/kg
<i>Other</i>		
LD50	Mouse	3160 mg/kg
Diethyl phthalate (CAS 84-66-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 22400 mg/kg > 10 ml/kg
<i>Inhalation</i>		
LC50	Rat	> 511 ppm, 6 Hours > 4.64 mg/l, 6 Hours
<i>Oral</i>		
LD50	Mouse	2500 mg/kg
	Rabbit	1000 mg/kg
	Rat	9500 - 31000 mg/kg 8.2 ml/kg
<i>Other</i>		
LD50	Mouse	3.22 g/kg 2.87 ml/kg
Dimethyl phthalate (CAS 131-11-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 12000 mg/kg
	Rat	38000 mg/kg
<i>Inhalation</i>		
LC50	-	6.76 mg/l
	Rat	> 10.4 mg/l, 6 Hours
<i>Oral</i>		
LD50	Guinea pig	2400 mg/kg
	Hen	10200 mg/kg
	Mouse	7200 mg/kg
	Rabbit	5300 mg/kg
	Rat	2400 mg/kg

Components	Species	Test Results
<i>Other</i>		
LD50	Mouse	1380 mg/kg
	Rat	324 mg/kg
Di-n-butyl phthalate (CAS 84-74-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	4200 mg/kg 20 ml/kg
<i>Inhalation</i>		
LC50	Mouse	25 mg/l, 2 Hours
	Rat	15.68 mg/l, 4 Hours >= 15.68 mg/l, 4 Hours
<i>Oral</i>		
LD50	Guinea pig	10000 mg/kg
	Mouse	4840 mg/kg
	Rat	6279 mg/kg
<i>Other</i>		
LD50	Mouse	720 mg/kg
	Rat	3050 mg/kg
Di-n-octyl phthalate (CAS 117-84-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Guinea pig	4900 mg/kg
<i>Oral</i>		
LD50	Mouse	13000 mg/kg
	Rat	53700 mg/kg
<i>Other</i>		
LD50	Mouse	14190 mg/kg
	Rat	49000 mg/kg
Methylene chloride (CAS 75-09-2)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Guinea pig	11600 ppm, 6 Hours 40.2 mg/l, 6 Hours
	Mouse	14400 ppm, 7 Hours 51.5 mg/l, 2 Hours 49.1 mg/l, 6 Hours 49 mg/l, 7 Hours
	Rat	2000 mg/l, 15 Minutes 88 mg/l, 900 Days 79 mg/l, 2 Hours 52 mg/l, 6 Hours
LD50	Mouse	16000 ppm, 7 Hours
<i>Oral</i>		
LD50	Rat	1600 mg/kg
<i>Other</i>		
LD50	Mouse	437 mg/kg



Components	Species	Test Results
N-Nitrosodimethylamine (CAS 62-75-9)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Mouse	57 mg/l, 4 Hours
	Rat	78 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	27 mg/kg
<i>Other</i>		
LD50	Rat	34 mg/kg
N-Nitrosodi-n-propylamine (CAS 621-64-7)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	480 mg/kg
<i>Other</i>		
LD50	Hamster	600 mg/kg
	Rat	487 mg/kg

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

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	May cause cancer.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

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.
Methylene chloride (CAS 75-09-2)	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.

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

Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	Reasonably Anticipated to be a Human Carcinogen.
Methylene chloride (CAS 75-09-2)	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.

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

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

<b>Reproductive toxicity</b>	May damage fertility or the unborn child.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Not available.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. May cause damage to organs through prolonged or repeated exposure.

## 12. Ecological information

<b>Ecotoxicity</b>	Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.
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Components	Species	Test Results
4-Bromophenyl phenyl ether (CAS 101-55-3)		
<b>Aquatic</b>		
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )
		4 - 6.1 mg/l, 96 hours
4-Chlorophenyl phenyl ether (CAS 7005-72-3)		
<b>Aquatic</b>		
Fish	LC50	Brook trout ( <i>Salvelinus fontinalis</i> )
		0.65 - 0.82 mg/l, 96 hours
Bis(2-chloroethoxy)methane (CAS 111-91-1)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )
		155 - 217 mg/l, 96 hours
Bis(2-chloroethyl)ether (CAS 111-44-4)		
<b>Aquatic</b>		
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )
		600 mg/l, 96 hours
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia pulex</i> )
		0.133 mg/l, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )
		> 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 ( <i>Daphnia magna</i> )
		> 0.96 mg/l, 48 hours
Fish	LC50	Shiner perch ( <i>Cymatogaster aggregata</i> )
		0.47 - 0.56 mg/l, 96 hours
Diethyl phthalate (CAS 84-66-2)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )
		86 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout ( <i>Oncorhynchus mykiss</i> )
		12 mg/l, 96 hours
Dimethyl phthalate (CAS 131-11-3)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )
		45.9 mg/l, 48 hours
Fish	LC50	Sheepshead minnow ( <i>Cyprinodon variegatus</i> )
		29 mg/l, 96 hours
Di-n-butyl phthalate (CAS 84-74-2)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )
		2.99 mg/l, 48 hours
Fish	LC50	Channel catfish ( <i>Ictalurus punctatus</i> )
		0.4 - 0.53 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
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

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

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

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

4-Chlorophenyl phenyl ether	4.08
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

<b>Partition coefficient n-octanol / water (log Kow)</b>	
Butyl benzyl phthalate	4.91
Diethyl phthalate	2.47
Dimethyl phthalate	1.6
Di-n-butyl phthalate	4.9
Di-n-octyl phthalate	8.1
Methylene chloride	1.25
N-Nitrosodimethylamine	-0.57
N-Nitrosodi-n-propylamine	1.36
N-Nitrosodiphenylamine	3.13

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. 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

#### US RCRA Hazardous Waste U List: Reference

4-Bromophenyl phenyl ether (CAS 101-55-3) U030  
 Bis(2-chloro-1-methylethyl) ether (CAS 108-60-1) U027  
 Bis(2-chloroethoxy)methane (CAS 111-91-1) U024  
 Bis(2-chloroethyl)ether (CAS 111-44-4) U025  
 Bis(2-ethylhexyl)phthalate (CAS 117-81-7) U028  
 Diethyl phthalate (CAS 84-66-2) U088  
 Dimethyl phthalate (CAS 131-11-3) U102  
 Di-n-butyl phthalate (CAS 84-74-2) U069  
 Di-n-octyl phthalate (CAS 117-84-0) U107  
 Methylene chloride (CAS 75-09-2) U080  
 N-Nitrosodi-n-propylamine (CAS 621-64-7) U111

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

### 14. Transport information

#### DOT

**UN number** UN1593  
**UN proper shipping name** Dichloromethane, solution  
**Transport hazard class(es)**  
**Class** 6.1(PGIII)  
**Subsidiary risk** -  
**Label(s)** 6.1  
**Packing group** III  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Special provisions** IB3, IP8, N36, T7, TP2  
**Packaging exceptions** 153  
**Packaging non bulk** 203  
**Packaging bulk** 241

#### IATA

**UN number** UN1593  
**UN proper shipping name** Dichloromethane solution  
**Transport hazard class(es)**  
**Class** 6.1(PGIII)  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards** No.

**ERG Code** 6L  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Other information**  
**Passenger and cargo aircraft** Allowed.  
**Cargo aircraft only** Allowed.

**IMDG**

**UN number** UN1593  
**UN proper shipping name** DICHLOROMETHANE SOLUTION  
**Transport hazard class(es)**  
**Class** 6.1(PGIII)  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-A, S-A  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

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

**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.  
 All components are on the U.S. EPA TSCA Inventory List.

**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.

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

4-Bromophenyl phenyl ether (CAS 101-55-3)	Listed.
4-Chlorophenyl phenyl ether (CAS 7005-72-3)	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.
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.
Methylene chloride (CAS 75-09-2)	Listed.
N-Nitrosodimethylamine (CAS 62-75-9)	Listed.

N-Nitrosodi-n-propylamine (CAS 621-64-7) Listed.  
 N-Nitrosodiphenylamine (CAS 86-30-6) Listed.

**SARA 304 Emergency release notification**

Bis(2-chloroethyl)ether (CAS 111-44-4) 10 LBS  
 N-Nitrosodimethylamine (CAS 62-75-9) 10 LBS

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

Methylene chloride (CAS 75-09-2) Cancer  
 N-Nitrosodimethylamine (CAS 62-75-9) Cancer  
 Methylene chloride (CAS 75-09-2) Heart  
 N-Nitrosodimethylamine (CAS 62-75-9) Liver  
 Methylene chloride (CAS 75-09-2) Central nervous system  
 N-Nitrosodimethylamine (CAS 62-75-9) Acute toxicity  
 Methylene chloride (CAS 75-09-2) Liver  
 Skin irritation  
 Eye irritation

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

**Hazard categories**  
 Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Bis(2-chloroethyl)ether	111-44-4	10	10000 lbs		
N-Nitrosodimethylamine	62-75-9	10	1000 lbs		

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Methylene chloride	75-09-2	97 - 100
Bis(2-ethylhexyl)phthalate	117-81-7	0.2
N-Nitrosodimethylamine	62-75-9	0.2
N-Nitrosodi-n-propylamine	621-64-7	0.2

**Other federal regulations**

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

Bis(2-chloroethyl)ether (CAS 111-44-4)  
 Bis(2-ethylhexyl)phthalate (CAS 117-81-7)  
 Dimethyl phthalate (CAS 131-11-3)  
 Di-n-butyl phthalate (CAS 84-74-2)  
 Methylene chloride (CAS 75-09-2)  
 N-Nitrosodimethylamine (CAS 62-75-9)  
 N-Nitrosodiphenylamine (CAS 86-30-6)

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

Not regulated.

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

**US state regulations**

**US. Massachusetts RTK - Substance List**

4-Bromophenyl phenyl ether (CAS 101-55-3)  
 4-Chlorophenyl phenyl ether (CAS 7005-72-3)  
 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)  
 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)  
 Methylene chloride (CAS 75-09-2)  
 N-Nitrosodimethylamine (CAS 62-75-9)

N-Nitrosodi-n-propylamine (CAS 621-64-7)

N-Nitrosodiphenylamine (CAS 86-30-6)

#### US. New Jersey Worker and Community Right-to-Know Act

Bis(2-chloro-1-methylethyl) ether (CAS 108-60-1)	500 LBS
Bis(2-chloroethoxy)methane (CAS 111-91-1)	500 LBS
Bis(2-chloroethyl)ether (CAS 111-44-4)	500 LBS
Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	500 LBS
Butyl benzyl phthalate (CAS 85-68-7)	500 LBS
Diethyl phthalate (CAS 84-66-2)	500 LBS
Dimethyl phthalate (CAS 131-11-3)	500 LBS
Di-n-butyl phthalate (CAS 84-74-2)	500 LBS
Di-n-octyl phthalate (CAS 117-84-0)	500 LBS
Methylene chloride (CAS 75-09-2)	500 LBS
N-Nitrosodimethylamine (CAS 62-75-9)	500 LBS
N-Nitrosodi-n-propylamine (CAS 621-64-7)	500 LBS
N-Nitrosodiphenylamine (CAS 86-30-6)	500 LBS

#### US. Pennsylvania RTK - Hazardous Substances

4-Bromophenyl phenyl ether (CAS 101-55-3)
4-Chlorophenyl phenyl ether (CAS 7005-72-3)
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)
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)
Methylene chloride (CAS 75-09-2)
N-Nitrosodimethylamine (CAS 62-75-9)
N-Nitrosodi-n-propylamine (CAS 621-64-7)
N-Nitrosodiphenylamine (CAS 86-30-6)

#### US. Rhode Island RTK

4-Bromophenyl phenyl ether (CAS 101-55-3)
4-Chlorophenyl phenyl ether (CAS 7005-72-3)
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)
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)
Methylene chloride (CAS 75-09-2)
N-Nitrosodimethylamine (CAS 62-75-9)
N-Nitrosodi-n-propylamine (CAS 621-64-7)
N-Nitrosodiphenylamine (CAS 86-30-6)

#### US. California Proposition 65

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

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
Methylene chloride (CAS 75-09-2)	Listed: April 1, 1988
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

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

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

Di-n-butyl phthalate (CAS 84-74-2)	Listed: December 2, 2005
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##### US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Bis(2-ethylhexyl)phthalate (CAS 117-81-7)	Listed: October 24, 2003
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**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
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	Yes

\*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**

<b>Issue date</b>	09-13-2014
<b>Version #</b>	01
<b>NFPA ratings</b>	Health: 2 Flammability: 1 Instability: 0

**Disclaimer**

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.

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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.

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