

## 1. Identification

<b>Product identifier</b>	<b>Secondary Stock Standard Mixture #2- 1666</b>	
<b>Other means of identification</b>		
<b>Item</b>	M-SSS16662M99	
<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 3
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity (fertility)	Category 2
	Specific target organ toxicity, single exposure	Category 1
	Specific target organ toxicity, repeated exposure	Category 1
<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



**Signal word**                      Danger

**Hazard statement**            Highly flammable liquid and vapor. Toxic if swallowed. Toxic in contact with skin. Causes serious eye irritation. Toxic if inhaled. Suspected of damaging fertility. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Harmful to aquatic life. Harmful 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. Use only outdoors or in a well-ventilated area. 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 mist or 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.

<b>Response</b>	If swallowed: Immediately call a poison center/doctor. 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. Call a poison center/doctor. Specific treatment (see this label). Rinse mouth. 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.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. 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>	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.
<b>Supplemental information</b>	0.85% of the mixture consists of component(s) of unknown acute oral toxicity. 0.75% of the mixture consists of component(s) of unknown acute dermal toxicity. 1.45% of the mixture consists of component(s) of unknown acute inhalation toxicity. 99.1% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 99.1% 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	%
Methanol		67-56-1	90 - 100
Isopropyl alcohol		67-63-0	0.25
n-Butyl alcohol		71-36-3	0.25
Cyclohexane		110-82-7	0.1
Ethyl acetate		141-78-6	0.1
Isopropyl ether		108-20-3	0.1
n-Butyl acetate		123-86-4	0.1
n-Heptane		142-82-5	0.1
n-Hexane		110-54-3	0.1
o-Xylene		95-47-6	0.1
p-Xylene		106-42-3	0.05

\*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 POISON CENTER or doctor/physician.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a POISON CENTER or doctor/physician if you feel unwell. Get medical attention if irritation develops and persists.
<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>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. 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.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	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. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Take off immediately all contaminated clothing. 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

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water fog. 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>	Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. 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 mist or 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. 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). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.  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. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. 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.
<b>Environmental precautions</b>	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. 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. 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. Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. 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 mist or 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.

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. Avoid spark promoters. Eliminate sources of ignition. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Components	Type	Value
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m <sup>3</sup>
Ethyl acetate (CAS 141-78-6)	PEL	300 ppm 1400 mg/m <sup>3</sup>
Isopropyl alcohol (CAS 67-63-0)	PEL	400 ppm 980 mg/m <sup>3</sup>
Isopropyl ether (CAS 108-20-3)	PEL	400 ppm 2100 mg/m <sup>3</sup>
Methanol (CAS 67-56-1)	PEL	500 ppm 260 mg/m <sup>3</sup>
n-Butyl acetate (CAS 123-86-4)	PEL	200 ppm 710 mg/m <sup>3</sup>
n-Butyl alcohol (CAS 71-36-3)	PEL	150 ppm 300 mg/m <sup>3</sup>
n-Heptane (CAS 142-82-5)	PEL	100 ppm 2000 mg/m <sup>3</sup>
n-Hexane (CAS 110-54-3)	PEL	500 ppm 1800 mg/m <sup>3</sup>
o-Xylene (CAS 95-47-6)	PEL	500 ppm 435 mg/m <sup>3</sup>
p-Xylene (CAS 106-42-3)	PEL	100 ppm 435 mg/m <sup>3</sup> 100 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Cyclohexane (CAS 110-82-7)	TWA	100 ppm

**US. ACGIH Threshold Limit Values**

<b>Components</b>	<b>Type</b>	<b>Value</b>
Ethyl acetate (CAS 141-78-6)	TWA	400 ppm
Isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm
Isopropyl ether (CAS 108-20-3)	TWA	200 ppm
	STEL	310 ppm
Methanol (CAS 67-56-1)	TWA	250 ppm
	STEL	250 ppm
n-Butyl acetate (CAS 123-86-4)	TWA	200 ppm
	STEL	200 ppm
n-Butyl alcohol (CAS 71-36-3)	TWA	150 ppm
	TWA	20 ppm
n-Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
	STEL	150 ppm
o-Xylene (CAS 95-47-6)	TWA	100 ppm
	STEL	150 ppm
p-Xylene (CAS 106-42-3)	STEL	150 ppm
	TWA	100 ppm

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

<b>Components</b>	<b>Type</b>	<b>Value</b>
Cyclohexane (CAS 110-82-7)	TWA	1050 mg/m3
		300 ppm
Ethyl acetate (CAS 141-78-6)	TWA	1400 mg/m3
		400 ppm
Isopropyl alcohol (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm
Isopropyl ether (CAS 108-20-3)	TWA	2100 mg/m3
		500 ppm
Methanol (CAS 67-56-1)	STEL	325 mg/m3
		250 ppm
	TWA	260 mg/m3
		200 ppm
n-Butyl acetate (CAS 123-86-4)	STEL	950 mg/m3
		200 ppm
	TWA	710 mg/m3
		150 ppm
n-Butyl alcohol (CAS 71-36-3)	Ceiling	150 mg/m3
		50 ppm
n-Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
		85 ppm
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3
		50 ppm
o-Xylene (CAS 95-47-6)	STEL	655 mg/m3
		150 ppm
	TWA	435 mg/m3
		100 ppm
p-Xylene (CAS 106-42-3)	STEL	655 mg/m3
		150 ppm
	TWA	435 mg/m3

**Biological limit values**

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Isopropyl alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*
Methanol (CAS 67-56-1)	15 mg/l	Methanol	Urine	*
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedio n, without hydrolysis	Urine	*
o-Xylene (CAS 95-47-6)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*
p-Xylene (CAS 106-42-3)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

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

**Exposure guidelines**

**US - California OELs: Skin designation**

Methanol (CAS 67-56-1)	Can be absorbed through the skin.
n-Butyl alcohol (CAS 71-36-3)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.

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

Methanol (CAS 67-56-1)	Skin designation applies.
n-Butyl alcohol (CAS 71-36-3)	Skin designation applies.

**US - Tennessee OELs: Skin designation**

Methanol (CAS 67-56-1)	Can be absorbed through the skin.
n-Butyl alcohol (CAS 71-36-3)	Can be absorbed through the skin.

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

Methanol (CAS 67-56-1)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.

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

Methanol (CAS 67-56-1)	Can be absorbed through the skin.
n-Butyl alcohol (CAS 71-36-3)	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.

**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 protective gloves.

**Other** Wear appropriate chemical resistant clothing.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

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**

**Physical state** Liquid.

**Form** Liquid

**Color** Not available.

**Odor** Not available.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** -144.04 °F (-97.8 °C) estimated

<b>Initial boiling point and boiling range</b>	148.46 °F (64.7 °C) estimated
<b>Flash point</b>	53.6 °F (12.0 °C) estimated
<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>	7.3 % estimated
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	169.3 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>	867.2 °F (464 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	0.786593 g/cm3 estimated
<b>Flammability class</b>	Flammable IB estimated
<b>Percent volatile</b>	98.95 % estimated
<b>Specific gravity</b>	0.79 estimated
<b>VOC (Weight %)</b>	98.95 % 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>Ingestion</b>	Toxic if swallowed.
<b>Inhalation</b>	Toxic by inhalation. May cause damage to organs by inhalation.
<b>Skin contact</b>	Toxic in contact with skin.
<b>Eye contact</b>	Causes serious eye irritation.

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

### Information on toxicological effects

**Acute toxicity** Toxic by inhalation. Toxic if swallowed. Toxic in contact with skin. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components	Species	Test Results
Cyclohexane (CAS 110-82-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg

Components	Species	Test Results
<i>Inhalation</i>		
LC50	Rat	> 32880 mg/m <sup>3</sup> , 4 Hours > 5540 ppm, 4 Hours
NOEL	Monkey	1243 ppm, 6 Hours
<i>Oral</i>		
LD50	Mouse	1300 mg/kg
	Rat	> 5000 mg/kg
Ethyl acetate (CAS 141-78-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 20000 mg/kg
<i>Inhalation</i>		
LC100	Mouse	48 mg/l, 2 Hours
	Rat	2400 ppm
LC25	Mouse	36 mg/l
LC50	Mouse	> 18 mg/l
		33.5 mg/l, 2 Hours
	Rat	16000 ppm, 6 Hours
		200 mg/l, 1 Hours
LD50	Mouse	1500 ppm, 4 Hours
	Rabbit	2500 ppm, 4 Hours
	Rat	4000 ppm, 4 Hours
<i>Oral</i>		
LD50	Guinea pig	5500 mg/kg
	Mouse	0.44 g/kg
	Rabbit	4.9 g/kg
	Rat	11.3 ml/kg
		5.6 g/kg
<i>Other</i>		
LD50	Cat	3 g/kg
	Guinea pig	3 g/kg
Isopropyl alcohol (CAS 67-63-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	12800 mg/kg 16.4 ml/kg
<i>Inhalation</i>		
LC50	Rat	> 10000 ppm, 6 Hours
<i>Oral</i>		
LD50	Dog	4797 mg/kg
	Mouse	3600 mg/kg
	Rabbit	5.03 g/kg
	Rat	4.7 g/kg
<i>Other</i>		
LD50	Mouse	1509 mg/kg
	Rat	1099 mg/kg
Isopropyl ether (CAS 108-20-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	16 ml/kg



Components	Species	Test Results
Methanol (CAS 67-56-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	15800 mg/kg
<i>Inhalation</i>		
LC50	Mouse	79.43 mg/l, 134 Minutes
	Rat	> 115.9 mg/l, 4 Hours 64000 ppm, 4 Hours 82.1 mg/l, 6 Hours
<i>Oral</i>		
LD50	Monkey	6000 mg/kg
	Mouse	7300 mg/kg
	Pig	> 5000 mg/kg
	Rabbit	14.4 g/kg
	Rat	5628 mg/kg
<i>Other</i>		
LD50	Guinea pig	3556 mg/kg
	Hamster	8555 mg/kg
	Mouse	4100 mg/kg
	Rabbit	1826 mg/kg
	Rat	2131 mg/kg
n-Butyl acetate (CAS 123-86-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg > 16 ml/kg
<i>Inhalation</i>		
LC50	Rat	1087 ppm, 4 Hours 0.74 mg/l, 4 Hours
	Wistar rat	160 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rabbit	7437 mg/kg
	Rat	14000 mg/kg 12.2 ml/kg
n-Butyl alcohol (CAS 71-36-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	3400 mg/kg 4.24 ml/kg
<i>Inhalation</i>		
LC50	Rat	8000 ppm, 4 Hours
<i>Oral</i>		
LD50	Hamster	1200 mg/kg
	Mouse	2680 mg/kg
	Rabbit	3500 mg/kg
	Rat	790 mg/kg 2.83 ml/kg
<i>Other</i>		
LD50	Mouse	377 mg/kg
	Rat	310 mg/kg

Components	Species	Test Results
n-Heptane (CAS 142-82-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 29.29 mg/l, 4 Hours
LD50	Mouse	75 mg/l, 2 Hours
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
<i>Other</i>		
LD50	Mouse	222 mg/kg
n-Hexane (CAS 110-54-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg > 5 ml/kg
<i>Inhalation</i>		
LC50	Mouse	48000 ppm, 4 Hours
	Rat	> 5000 ppm, 24 Hours > 31.86 mg/l 73860 ppm, 4 Hours
<i>Oral</i>		
LD50	Rat	24 ml/kg 24 mg/kg
	Wistar rat	49 mg/kg
o-Xylene (CAS 95-47-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 ml/kg > 43 g/kg
<i>Inhalation</i>		
LC50	Mouse	4595 ppm, 6 Hours
	Rat	6350 ppm, 4 Hours 4330 ppm, 6 Hours
<i>Oral</i>		
LD50	Mouse	1590 mg/kg
	Rat	3523 mg/kg 10 ml/kg
p-Xylene (CAS 106-42-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 ml/kg > 43 g/kg
<i>Inhalation</i>		
LC50	Mouse	3900 ppm, 6 Hours
	Rat	5922 ppm, 4 Hours 4591 ppm, 6 Hours
<i>Oral</i>		
LD50	Mouse	1590 mg/kg
	Rat	3523 - 8600 mg/kg

Components	Species	Test Results
<i>Other</i> LD50	Rat	3.8 mg/kg

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

<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary 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>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
o-Xylene (CAS 95-47-6)	3 Not classifiable as to carcinogenicity to humans.
p-Xylene (CAS 106-42-3)	3 Not classifiable as to carcinogenicity to humans.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
Not listed.	
<b>Reproductive toxicity</b>	Suspected of damaging fertility.
<b>Specific target organ toxicity - single exposure</b>	Causes damage to organs.
<b>Specific target organ toxicity - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Not available.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Causes damage to organs through prolonged or repeated exposure.

## 12. Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Components	Species	Test Results
Cyclohexane (CAS 110-82-7)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 23.03 - 42.07 mg/l, 96 hours
Ethyl acetate (CAS 141-78-6)		
<b>Aquatic</b>		
Fish	LC50	Indian catfish ( <i>Heteropneustes fossilis</i> ) 200.32 - 225.42 mg/l, 96 hours
Isopropyl alcohol (CAS 67-63-0)		
<b>Aquatic</b>		
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> ) > 1400 mg/l, 96 hours
Isopropyl ether (CAS 108-20-3)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 91.7 mg/l, 96 hours
Methanol (CAS 67-56-1)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) > 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) > 100 mg/l, 96 hours
n-Butyl acetate (CAS 123-86-4)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 17 - 19 mg/l, 96 hours
n-Butyl alcohol (CAS 71-36-3)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 1897 - 2072 mg/l, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> ) 100 - 500 mg/l, 96 hours

Components	Species		Test Results
n-Heptane (CAS 142-82-5)			
<b>Aquatic</b>			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours
n-Hexane (CAS 110-54-3)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours
o-Xylene (CAS 95-47-6)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.78 - 2.51 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5.59 - 11.6 mg/l, 96 hours
p-Xylene (CAS 106-42-3)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	3.55 - 6.31 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.6 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)**

Cyclohexane	3.44
Ethyl acetate	0.73
Isopropyl alcohol	0.05
Isopropyl ether	1.52
Methanol	-0.77
n-Butyl acetate	1.78
n-Butyl alcohol	0.88
n-Heptane	4.66
n-Hexane	3.9
o-Xylene	3.12
p-Xylene	3.15

**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 U List: Reference**

Cyclohexane (CAS 110-82-7)	U056
Ethyl acetate (CAS 141-78-6)	U112
Methanol (CAS 67-56-1)	U154
n-Butyl alcohol (CAS 71-36-3)	U031
o-Xylene (CAS 95-47-6)	U239
p-Xylene (CAS 106-42-3)	U239

**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	UN1230
UN proper shipping name	Methanol, solution
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP2
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242

### IATA

UN number	UN1230
UN proper shipping name	Methanol solution
Transport hazard class(es)	
Class	3
Subsidiary risk	6.1(PGI, II)
Packing group	II
Environmental hazards	No.
ERG Code	3L
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	UN1230
UN proper shipping name	METHANOL SOLUTION
Transport hazard class(es)	
Class	3
Subsidiary risk	6.1(PGI, II)
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
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)

Not regulated.

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

Cyclohexane (CAS 110-82-7)	Listed.
Ethyl acetate (CAS 141-78-6)	Listed.
Isopropyl alcohol (CAS 67-63-0)	Listed.
Isopropyl ether (CAS 108-20-3)	Listed.
Methanol (CAS 67-56-1)	Listed.
n-Butyl acetate (CAS 123-86-4)	Listed.
n-Butyl alcohol (CAS 71-36-3)	Listed.
n-Heptane (CAS 142-82-5)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
o-Xylene (CAS 95-47-6)	Listed.
p-Xylene (CAS 106-42-3)	Listed.

#### SARA 304 Emergency release notification

Not regulated.

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

Not listed.

### 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

Not listed.

**SARA 311/312 Hazardous chemical** No

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Methanol	67-56-1	90 - 100

### Other federal regulations

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

Methanol (CAS 67-56-1)  
n-Hexane (CAS 110-54-3)  
o-Xylene (CAS 95-47-6)  
p-Xylene (CAS 106-42-3)

#### 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

Cyclohexane (CAS 110-82-7)  
Ethyl acetate (CAS 141-78-6)  
Isopropyl alcohol (CAS 67-63-0)  
Isopropyl ether (CAS 108-20-3)  
Methanol (CAS 67-56-1)  
n-Butyl acetate (CAS 123-86-4)  
n-Butyl alcohol (CAS 71-36-3)  
n-Heptane (CAS 142-82-5)  
n-Hexane (CAS 110-54-3)  
o-Xylene (CAS 95-47-6)  
p-Xylene (CAS 106-42-3)

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

Cyclohexane (CAS 110-82-7)	500 LBS
Isopropyl alcohol (CAS 67-63-0)	500 LBS
Methanol (CAS 67-56-1)	500 LBS
n-Butyl alcohol (CAS 71-36-3)	500 LBS

n-Hexane (CAS 110-54-3)	500 LBS
o-Xylene (CAS 95-47-6)	500 LBS
p-Xylene (CAS 106-42-3)	500 LBS

**US. Pennsylvania RTK - Hazardous Substances**

Cyclohexane (CAS 110-82-7)  
 Ethyl acetate (CAS 141-78-6)  
 Isopropyl alcohol (CAS 67-63-0)  
 Isopropyl ether (CAS 108-20-3)  
 Methanol (CAS 67-56-1)  
 n-Butyl acetate (CAS 123-86-4)  
 n-Butyl alcohol (CAS 71-36-3)  
 n-Heptane (CAS 142-82-5)  
 n-Hexane (CAS 110-54-3)  
 o-Xylene (CAS 95-47-6)  
 p-Xylene (CAS 106-42-3)

**US. Rhode Island RTK**

Cyclohexane (CAS 110-82-7)  
 Ethyl acetate (CAS 141-78-6)  
 Isopropyl alcohol (CAS 67-63-0)  
 Methanol (CAS 67-56-1)  
 n-Butyl acetate (CAS 123-86-4)  
 n-Butyl alcohol (CAS 71-36-3)  
 n-Hexane (CAS 110-54-3)  
 o-Xylene (CAS 95-47-6)  
 p-Xylene (CAS 106-42-3)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

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

Methanol (CAS 67-56-1)	Listed: March 16, 2012
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**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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>	08-30-2014
<b>Version #</b>	01
<b>NFPA ratings</b>	Health: 2 Flammability: 3 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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