

**1. Identification**

<b>Product identifier</b>	<b>European Regulation Standards Pesticide Mixture 4</b>	
<b>Other means of identification</b>		
<b>Item</b>	M-EUPESTMIX4U99	
<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>	Chemtec US	800-424-9300
	Chemtec 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 4
	Acute toxicity, inhalation	Category 3
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1
	Reproductive toxicity (the unborn child)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
<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. Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic if inhaled. May cause drowsiness or dizziness. Suspected of damaging the unborn child. May cause 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 mist or vapor. 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 eye protection/face protection. Wear protective gloves/protective clothing/eye protection/face protection.

### Response

If swallowed: Call a poison center/doctor if you feel unwell. 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. Rinse mouth. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.

### Storage

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

0.01% of the mixture consists of component(s) of unknown acute inhalation toxicity. 0.01% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Toluene		108-88-3	99 - 100
beta-Cyfluthrin		68359-37-5	0.1
Cypermethrin		52315-07-8	0.1
Deltamethrin		52918-63-5	0.05
Fenvalerate		51630-58-1	0.05
lambda-Cyhalothrin		91465-08-6	0.05
Permethrin		52645-53-1	0.05
Dicloran		99-30-9	0.01
Pendimethalin		40487-42-1	0.01
Tefluthrin		79538-32-2	0.01
Tetrachlorvinphos		22248-79-9	0.001

## 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 POISON CENTER or doctor/physician.

### Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. 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

Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

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

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.

<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. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Take off all contaminated clothing immediately. 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.
<b>5. Fire-fighting measures</b>	
<b>Suitable extinguishing media</b>	Water fog. Foam. Carbon dioxide (CO2). 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 mist or vapor. 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. 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. 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. 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.
<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. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. 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 mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. 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. 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

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

Components	Type	Value
lambda-Cyhalothrin (CAS 91465-08-6)	PEL	5 mg/m <sup>3</sup>
Permethrin (CAS 52645-53-1)	PEL	5 mg/m <sup>3</sup>

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

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
lambda-Cyhalothrin (CAS 91465-08-6)	TWA	5 mg/m <sup>3</sup>
Permethrin (CAS 52645-53-1)	TWA	5 mg/m <sup>3</sup>
Toluene (CAS 108-88-3)	TWA	20 ppm

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

Components	Type	Value
lambda-Cyhalothrin (CAS 91465-08-6)	TWA	5 mg/m <sup>3</sup>
Permethrin (CAS 52645-53-1)	TWA	5 mg/m <sup>3</sup>
Toluene (CAS 108-88-3)	STEL	560 mg/m <sup>3</sup>
		150 ppm
	TWA	375 mg/m <sup>3</sup>
		100 ppm

## Biological limit values

### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

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

## Exposure guidelines

### US - California OELs: Skin designation

Toluene (CAS 108-88-3)

Can be absorbed through the skin.

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

Toluene (CAS 108-88-3)

Skin designation applies.

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

## 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. Suitable gloves can be recommended by the glove supplier.

#### Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

### Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece.

### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

## General hygiene considerations

When using do not smoke. Keep away from food and drink. 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

#### Physical state

Liquid.

#### Form

Liquid.

#### Color

Not available.

#### Odor

Not available.

#### Odor threshold

Not available.

#### pH

Not available.

#### Melting point/freezing point

-138.82 °F (-94.9 °C) estimated

#### Initial boiling point and boiling range

231.08 °F (110.6 °C) estimated

#### Flash point

40.0 °F (4.4 °C) estimated

#### Evaporation rate

Not available.

#### Flammability (solid, gas)

Not applicable.

#### Upper/lower flammability or explosive limits

##### Flammability limit - lower (%)

Not available.

##### Flammability limit - upper (%)

Not available.

##### Explosive limit - lower (%)

Not available.

##### Explosive limit - upper (%)

Not available.

#### Vapor pressure

37.86 hPa estimated

Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	896 °F (480 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.86414 g/cm3 estimated
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	99.57 % estimated
Specific gravity	0.86 estimated
VOC (Weight %)	99.57 % estimated

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	Toxic if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Headache. May cause drowsiness and dizziness. 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** Toxic if inhaled. Harmful if swallowed. Narcotic effects. May cause an allergic skin reaction.

Components	Species	Test Results
beta-Cyfluthrin (CAS 68359-37-5)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Rat	0.1 mg/l, 4 Hours
<b>Oral</b>		
LD50	Mouse	140 mg/kg
	Rat	270 mg/kg
Cypermethrin (CAS 52315-07-8)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2460 mg/kg

Components	Species	Test Results
	Rat	1600 mg/kg
<b>Inhalation</b>		
LC50	Rat	2.5 mg/l, 4 Hours
<b>Oral</b>		
LD50	Chicken	7 g/kg
	Mouse	138 mg/kg
	Rabbit	3 g/kg
	Rat	4123 mg/kg
Deltamethrin (CAS 52918-63-5)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg
	Rat	700 mg/kg
<b>Inhalation</b>		
LC50	-	0.6 mg/l, 6 Hours
	Rat	0.785 mg/l, 2 Hours
<b>Oral</b>		
LD50	Dog	2 mg/kg
	Mouse	19 mg/kg
	Rat	31 mg/kg
Fenvalerate (CAS 51630-58-1)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	1000 - 3000 mg/kg
<b>Inhalation</b>		
LC50	Rat	> 101 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	200 mg/kg
lambda-Cyhalothrin (CAS 91465-08-6)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Rat	56 mg/kg
Pendimethalin (CAS 40487-42-1)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	> 5000 mg/kg
<b>Oral</b>		
LD50	Mouse	1340 mg/kg
	Rabbit	> 5000 mg/kg
	Rat	1050 mg/kg
Permethrin (CAS 52645-53-1)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Mouse	> 2500 mg/kg
	Rabbit	> 2000 mg/kg
	Rat	2500 mg/kg
<b>Inhalation</b>		
LC50	Rat	3.4 mg/l, 4 Hours

Components	Species	Test Results
<b>Oral</b>		
LD50	Chicken	> 3000 mg/kg
	Guinea pig	> 4000 mg/kg
	Hen	> 1500 mg/kg
	Mouse	250 - 500 mg/kg
	Rabbit	> 4000 mg/kg
	Rat	430 - 4000 mg/kg
Tefluthrin (CAS 79538-32-2)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rat	200 mg/kg
<b>Inhalation</b>		
LC50	Rat	0.04 mg/l, 4 Hours
<b>Oral</b>		
LD50	Mouse	46 mg/kg
	Rat	22 mg/kg
Tetrachlorvinphos (CAS 22248-79-9)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Mouse	> 7500 mg/kg
	Rat	> 10000 mg/kg
Toluene (CAS 108-88-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 5000 mg/kg 14.1 ml/kg
<b>Inhalation</b>		
LC50	Mouse	6405 - 7436 ppm, 6 Hours 5320 ppm, 8 Hours 400 ppm, 24 Hours
	Rat	26700 ppm, 1 Hours 12200 ppm, 2 Hours 8000 ppm, 4 Hours 5879 - 6281 ppm, 6 Hours 12.5 - 28.8 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	2.6 g/kg
<b>Other</b>		
LD50	Mouse	59 mg/kg
	Rat	1332 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** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Deltamethrin (CAS 52918-63-5)	3 Not classifiable as to carcinogenicity to humans.
Fenvalerate (CAS 51630-58-1)	3 Not classifiable as to carcinogenicity to humans.
Permethrin (CAS 52645-53-1)	3 Not classifiable as to carcinogenicity to humans.
Tetrachlorvinphos (CAS 22248-79-9)	3 Not classifiable as to carcinogenicity to humans.
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.

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

Not listed.

**Reproductive toxicity** Suspected of damaging the unborn child.

**Specific target organ toxicity - single exposure** May cause drowsiness and dizziness.

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

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

**12. Ecological information**

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Cypermethrin (CAS 52315-07-8)			
<b>Aquatic</b>			
Fish	LC50	Carp ( <i>Cyprinus carpio</i> )	0.0006 - 0.0028 mg/l, 96 hours
Deltamethrin (CAS 52918-63-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	0 mg/l, 48 hours
Fish	LC50	Indian catfish ( <i>Heteropneustes fossilis</i> )	0.0019 mg/l, 96 hours
Fenvalerate (CAS 51630-58-1)			
<b>Aquatic</b>			
Crustacea	EC50	Scud ( <i>Gammarus pseudolimnaeus</i> )	0.0001 - 0.0002 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> )	0.0003 - 0.0005 mg/l, 96 hours
Pendimethalin (CAS 40487-42-1)			
<b>Aquatic</b>			
Fish	LC50	Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> )	> 0.05 mg/l, 96 hours
Permethrin (CAS 52645-53-1)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	0.0006 - 0.0025 mg/l, 48 hours
Fish	LC50	Apache trout ( <i>Oncorhynchus gilae apache</i> )	0.0013 - 0.0022 mg/l, 96 hours
Tetrachlorvinphos (CAS 22248-79-9)			
<b>Aquatic</b>			
Crustacea	EC50	Northern pink shrimp ( <i>Penaeus duorarum</i> )	0.28 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> )	0.332 - 0.557 mg/l, 96 hours
Toluene (CAS 108-88-3)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	5.46 - 9.83 mg/l, 48 hours

Components	Species	Test Results
Fish	LC50 Coho salmon,silver salmon (Oncorhynchus kisutch)	8.11 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**

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

beta-Cyfluthrin	5.94
Cypermethrin	6.6
Deltamethrin	6.2
Fenvalerate	4.42
lambda-Cyhalothrin	6.8
Permethrin	6.5
Tefluthrin	6.5
Tetrachlorvinphos	3.53
Toluene	2.73

**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. 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.

**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**

**DOT**

<b>UN number</b>	UN1294
<b>UN proper shipping name</b>	Toluene, solution (Toluene RQ = 1004 LBS), MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB2, T4, TP1
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

**IATA**

<b>UN number</b>	UN1294
<b>UN proper shipping name</b>	Toluene solution (Toluene)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	Yes

**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** UN1294  
**UN proper shipping name** TOLUENE SOLUTION (Toluene), MARINE POLLUTANT  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** Yes  
**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 established.

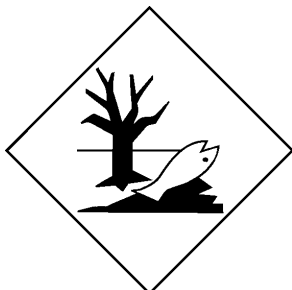
**DOT**



**IATA; IMDG**



**Marine pollutant**



**General information** IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
 One or more components are not listed on TSCA.

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

Not regulated.

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

lambda-Cyhalothrin (CAS 91465-08-6)	Listed.
Permethrin (CAS 52645-53-1)	Listed.
Toluene (CAS 108-88-3)	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.
Toluene	108-88-3	99 - 100

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

Toluene (CAS 108-88-3)

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

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Toluene (CAS 108-88-3) 6594

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Toluene (CAS 108-88-3) 35 %WV

**DEA Exempt Chemical Mixtures Code Number**

Toluene (CAS 108-88-3) 594

**US state regulations****US - New Jersey RTK - Substances: Listed substance**

beta-Cyfluthrin (CAS 68359-37-5)  
 Dicloran (CAS 99-30-9)  
 Fenvalerate (CAS 51630-58-1)  
 Pendimethalin (CAS 40487-42-1)  
 Permethrin (CAS 52645-53-1)  
 Tetrachlorvinphos (CAS 22248-79-9)  
 Toluene (CAS 108-88-3)

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

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

Toluene (CAS 108-88-3)

**US. Massachusetts RTK - Substance List**

Cypermethrin (CAS 52315-07-8)  
 Fenvalerate (CAS 51630-58-1)  
 lambda-Cyhalothrin (CAS 91465-08-6)  
 Permethrin (CAS 52645-53-1)  
 Tetrachlorvinphos (CAS 22248-79-9)  
 Toluene (CAS 108-88-3)

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

beta-Cyfluthrin (CAS 68359-37-5)  
Dicloran (CAS 99-30-9)  
Fenvalerate (CAS 51630-58-1)  
lambda-Cyhalothrin (CAS 91465-08-6)  
Pendimethalin (CAS 40487-42-1)  
Permethrin (CAS 52645-53-1)  
Tetrachlorvinphos (CAS 22248-79-9)  
Toluene (CAS 108-88-3)

### US. Pennsylvania RTK - Hazardous Substances

lambda-Cyhalothrin (CAS 91465-08-6)  
Permethrin (CAS 52645-53-1)  
Tetrachlorvinphos (CAS 22248-79-9)  
Toluene (CAS 108-88-3)

### US. Pennsylvania Worker and Community Right-to-Know Law

lambda-Cyhalothrin (CAS 91465-08-6)  
Permethrin (CAS 52645-53-1)  
Tetrachlorvinphos (CAS 22248-79-9)  
Toluene (CAS 108-88-3)

### US. Rhode Island RTK

beta-Cyfluthrin (CAS 68359-37-5)  
Dicloran (CAS 99-30-9)  
Fenvalerate (CAS 51630-58-1)  
Pendimethalin (CAS 40487-42-1)  
Permethrin (CAS 52645-53-1)  
Tetrachlorvinphos (CAS 22248-79-9)  
Toluene (CAS 108-88-3)

### 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

Toluene (CAS 108-88-3) Listed: January 1, 1991

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

Toluene (CAS 108-88-3) Listed: August 7, 2009

### 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)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
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	06-28-2016
Version #	01
NFPA ratings	Health: 3 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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