

**1. Identification****Product identifier**                      **DIN 12673 Chlorophenols Standard Mixture****Other means of identification****Item**    M-DIN12673CPG99**Recommended use**                      For Laboratory Use Only**Recommended restrictions**              None known.**Manufacturer/Importer/Supplier/Distributor information****Manufacturer****Company name**                      Chem Service, Inc.  
**Address**                                      660 Tower Lane  
West Chester, PA 19380  
United States**Telephone**                              Toll Free                                      800-452-9994  
Direct    610-692-3026**Website**                                      www.chemservice.com**E-mail**                                        info@chemservice.com**Emergency phone number**              Chemtrec US                                      800-424-9300  
Chemtrec outside US                              +1 703-527-3887**2. Hazard(s) identification****Physical hazards**                      Flammable liquids                                      Category 2**Health hazards**                              Acute toxicity, oral                                      Category 4  
Acute toxicity, dermal                                      Category 3  
Serious eye damage/eye irritation                      Category 2A**Environmental hazards**                      Hazardous to the aquatic environment, acute hazard                      Category 1  
Hazardous to the aquatic environment, long-term hazard                      Category 2**OSHA defined hazards**                      Not classified.**Label elements****Signal word**                                      Danger**Hazard statement**                      Highly flammable liquid and vapor. Harmful if swallowed. Toxic in contact with skin. Causes serious eye irritation. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.**Precautionary statement****Prevention**

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. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves/protective clothing. Wear protective gloves/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 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 if you feel unwell. 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. Collect spillage.

**Storage**

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>	99.99% of the mixture consists of component(s) of unknown acute dermal toxicity.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ethanol, absolute		64-17-5	99.99
2-Chlorophenol		95-57-8	0.003
3-Chlorophenol		108-43-0	0.003
4-Chlorophenol		106-48-9	0.003
2,3-Dichlorophenol		576-24-9	0.0004
2,4-Dichlorophenol		120-83-2	0.0004
2,5-Dichlorophenol		583-78-8	0.0004
2,6-Dichlorophenol		87-65-0	0.0004
3,4-Dichlorophenol		95-77-2	0.0004
3,5-Dichlorophenol		591-35-5	0.0004
2,3,4-Trichlorophenol		N/A	0.0003
2,3,5-Trichlorophenol		933-78-8	0.0003
2,3,6-Trichlorophenol		933-75-5	0.0003
2,4,5-Trichlorophenol		95-95-4	0.0003
2,4,6-Trichlorophenol		88-06-2	0.0003
3,4,5-Trichlorophenol		609-19-8	0.0003
2,3,4,5-Tetrachlorophenol		4901-51-3	0.0002
2,3,4,6-Tetrachlorophenol		58-90-2	0.0002
2,3,5,6-Tetrachlorophenol		935-95-5	0.0002
Pentachlorophenol		87-86-5	0.0001

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing 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 vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
<b>Most important symptoms/effects, acute and delayed</b>	Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.
<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 immediately all contaminated clothing. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water fog. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
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<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

**Personal precautions, protective equipment and emergency procedures** 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 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.

**Methods and materials for containment and cleaning up** 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.

**Environmental precautions** 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

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. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

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

### Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. 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). Store in refrigerator (0°C to 5°C).

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Components	Type	Value
Ethanol, absolute (CAS 64-17-5)	PEL	1900 mg/m <sup>3</sup>
		1000 ppm
Pentachlorophenol (CAS 87-86-5)	PEL	0.5 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Ethanol, absolute (CAS 64-17-5)	STEL	1000 ppm	
Pentachlorophenol (CAS 87-86-5)	STEL	1 mg/m <sup>3</sup>	Inhalable fraction and vapor.
	TWA	0.5 mg/m <sup>3</sup>	Inhalable fraction and vapor.

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

Components	Type	Value
Ethanol, absolute (CAS 64-17-5)	TWA	1900 mg/m <sup>3</sup>
		1000 ppm
Pentachlorophenol (CAS 87-86-5)	TWA	0.5 mg/m <sup>3</sup>

#### US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
2,4-Dichlorophenol (CAS 120-83-2)	TWA	6.7 mg/m <sup>3</sup>
		1 ppm

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Exposure guidelines

#### US - California OELs: Skin designation

Pentachlorophenol (CAS 87-86-5)

Can be absorbed through the skin.

**US - Tennessee OELs: Skin designation**

Pentachlorophenol (CAS 87-86-5)	Can be absorbed through the skin.
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**US ACGIH Threshold Limit Values: Skin designation**

Pentachlorophenol (CAS 87-86-5)	Can be absorbed through the skin.
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**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

Pentachlorophenol (CAS 87-86-5)	Can be absorbed through the skin.
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**US WEEL Guides: Skin designation**

2,4-Dichlorophenol (CAS 120-83-2)	Can be absorbed through the skin.
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**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Pentachlorophenol (CAS 87-86-5)	Can be absorbed through the skin.
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**Appropriate engineering controls** Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

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

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

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**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 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.

**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** -173.38 °F (-114.1 °C) estimated

**Initial boiling point and boiling range** 173.3 °F (78.5 °C) estimated

**Flash point** 55.0 °F (12.8 °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** 79.06 hPa estimated

**Vapor density** Not available.

**Relative density** 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>	685 °F (362.78 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	0.78896 g/cm3 estimated
<b>Explosive properties</b>	Not explosive.
<b>Flammability class</b>	Flammable IB estimated
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	99.99 % estimated
<b>Specific gravity</b>	0.79 estimated
<b>VOC (Weight %)</b>	99.99 % 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>	Toxic gas.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Toxic in contact with skin.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Harmful if swallowed.

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

### Information on toxicological effects

**Acute toxicity** Toxic in contact with skin. Harmful if swallowed.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
2,3,4,5-Tetrachlorophenol (CAS 4901-51-3)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Mouse	400 mg/kg
2,3,4,6-Tetrachlorophenol (CAS 58-90-2)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	250 mg/kg
<b>Oral</b>		
LD50	Gerbil	698 mg/kg
	Guinea pig	250 mg/kg
	Mouse	131 mg/kg
	Rat	140 mg/kg

Components	Species	Test Results
2,3,5,6-Tetrachlorophenol (CAS 935-95-5)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Mouse	109 mg/kg
2,3,5-Trichlorophenol (CAS 933-78-8)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Guinea pig	1000 mg/kg
2,3,6-Trichlorophenol (CAS 933-75-5)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Guinea pig	1000 mg/kg
2,3-Dichlorophenol (CAS 576-24-9)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Mouse	2376 mg/kg
2,4,5-Trichlorophenol (CAS 95-95-4)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Rat	820 mg/kg 0.82 g/kg
2,4,6-Trichlorophenol (CAS 88-06-2)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Rat	820 mg/kg
2,4-Dichlorophenol (CAS 120-83-2)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Mouse	3100 mg/kg
	Rat	780 mg/kg, Days
<b>Oral</b>		
LD50	Guinea pig	500 - 1000 mg/kg
	Mouse	1276 - 1352 mg/kg
	Rat	2000 - 2400 mg/kg
2,6-Dichlorophenol (CAS 87-65-0)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Mouse	2120 mg/kg
2-Chlorophenol (CAS 95-57-8)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	740 mg/kg
<b>Oral</b>		
LD50	Mouse	670 mg/kg
	Rat	670 mg/kg
3,4,5-Trichlorophenol (CAS 609-19-8)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Guinea pig	1000 mg/kg

Components	Species	Test Results
3,4-Dichlorophenol (CAS 95-77-2)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Mouse	1685 mg/kg
3,5-Dichlorophenol (CAS 591-35-5)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Mouse	2389 mg/kg
3-Chlorophenol (CAS 108-43-0)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Rat	0.56 ml/kg
4-Chlorophenol (CAS 106-48-9)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	> 5000 mg/kg, 24 Hours
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Rat	> 750 mg/l, 7 Hours
<b>Oral</b>		
LD50	Mouse	860 mg/kg
	Rat	988 mg/kg
Ethanol, absolute (CAS 64-17-5)		
<b><u>Acute</u></b>		
<b>Inhalation</b>		
LC50	Cat	85.41 mg/l, 4.5 Hours 43.68 mg/l, 6 Hours
<i>Vapor</i>		
LC50	Mouse	> 60000 ppm, 60 Minutes
LC50	Mouse	79.43 mg/l, 134 Minutes
<i>Vapor</i>		
LC50	Rat	> 115.9 mg/l, 4 Hours
LC50	Rat	20000 ppm, 10 Hours
<i>Vapor</i>		
LC50	Rat	51.3 mg/l, 6 Hours
<b>Oral</b>		
LD50	Dog	5.5 g/kg
	Guinea pig	5.6 g/kg
	Monkey	6000 mg/kg
	Mouse	10500 ml/kg
	Pig	> 5000 mg/kg
	Rat	1187 - 2769 mg/kg 10470 mg/kg 7800 ml/kg
Pentachlorophenol (CAS 87-86-5)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	96 mg/kg



Components	Species	Test Results
<b>Oral</b> LD50	Rat	146 mg/kg

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

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

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

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**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**

2,3,4,5-Tetrachlorophenol (CAS 4901-51-3)	2B Possibly carcinogenic to humans.
2,3,4,6-Tetrachlorophenol (CAS 58-90-2)	2B Possibly carcinogenic to humans.
2,3,5,6-Tetrachlorophenol (CAS 935-95-5)	2B Possibly carcinogenic to humans.
2,3,5-Trichlorophenol (CAS 933-78-8)	2B Possibly carcinogenic to humans.
2,3,6-Trichlorophenol (CAS 933-75-5)	2B Possibly carcinogenic to humans.
2,3-Dichlorophenol (CAS 576-24-9)	2B Possibly carcinogenic to humans.
2,4,5-Trichlorophenol (CAS 95-95-4)	2B Possibly carcinogenic to humans.
2,4,6-Trichlorophenol (CAS 88-06-2)	2B Possibly carcinogenic to humans.
2,4-Dichlorophenol (CAS 120-83-2)	2B Possibly carcinogenic to humans.
2,5-Dichlorophenol (CAS 583-78-8)	2B Possibly carcinogenic to humans.
2,6-Dichlorophenol (CAS 87-65-0)	2B Possibly carcinogenic to humans.
2-Chlorophenol (CAS 95-57-8)	2B Possibly carcinogenic to humans.
3,4,5-Trichlorophenol (CAS 609-19-8)	2B Possibly carcinogenic to humans.
3,4-Dichlorophenol (CAS 95-77-2)	2B Possibly carcinogenic to humans.
3,5-Dichlorophenol (CAS 591-35-5)	2B Possibly carcinogenic to humans.
3-Chlorophenol (CAS 108-43-0)	2B Possibly carcinogenic to humans.
4-Chlorophenol (CAS 106-48-9)	2B Possibly carcinogenic to humans.
Pentachlorophenol (CAS 87-86-5)	2B Possibly carcinogenic to humans.

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

2,4,6-Trichlorophenol (CAS 88-06-2)	Reasonably Anticipated to be a Human Carcinogen.
Pentachlorophenol (CAS 87-86-5)	Reasonably Anticipated to be a Human Carcinogen.

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

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

**12. Ecological information**

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

Components	Species	Test Results
2,3,4,5-Tetrachlorophenol (CAS 4901-51-3)		
<b>Aquatic</b>		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)
		0.172 - 0.245 mg/l, 96 hours
2,3,4,6-Tetrachlorophenol (CAS 58-90-2)		
<b>Aquatic</b>		
Fish	LC50	Bluegill (Lepomis macrochirus)
		0.11 - 0.16 mg/l, 96 hours

Components	Species	Test Results
2,3,5,6-Tetrachlorophenol (CAS 935-95-5)		
<b>Aquatic</b>		
Fish LC50	Bluegill ( <i>Lepomis macrochirus</i> )	0.13 - 0.21 mg/l, 96 hours
2,3,5-Trichlorophenol (CAS 933-78-8)		
<b>Aquatic</b>		
Fish LC50	Starry, european flounder ( <i>Platichthys flesus</i> )	2.31 mg/l, 96 hours
2,3,6-Trichlorophenol (CAS 933-75-5)		
<b>Aquatic</b>		
Fish LC50	Starry, european flounder ( <i>Platichthys flesus</i> )	4.4 mg/l, 96 hours
2,3-Dichlorophenol (CAS 576-24-9)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Daphnia magna</i> )	2.8 - 3.4 mg/l, 48 hours
Fish LC50	Medaka, high-eyes ( <i>Oryzias latipes</i> )	2.9 - 5.7 mg/l, 96 hours
2,4,5-Trichlorophenol (CAS 95-95-4)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Daphnia magna</i> )	0.72 - 1.2 mg/l, 48 hours
Fish LC50	Bluegill ( <i>Lepomis macrochirus</i> )	0.39 - 0.54 mg/l, 96 hours
2,4,6-Trichlorophenol (CAS 88-06-2)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Daphnia magna</i> )	1.8 - 2.6 mg/l, 48 hours
Fish LC50	Bluegill ( <i>Lepomis macrochirus</i> )	0.35 - 0.49 mg/l, 96 hours
2,4-Dichlorophenol (CAS 120-83-2)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Daphnia magna</i> )	1.2 - 1.7 mg/l, 48 hours
Fish LC50	Bluegill ( <i>Lepomis macrochirus</i> )	1.6 - 2.6 mg/l, 96 hours
2,5-Dichlorophenol (CAS 583-78-8)		
<b>Aquatic</b>		
Fish LC50	Medaka, high-eyes ( <i>Oryzias latipes</i> )	2.5 - 4.5 mg/l, 96 hours
2,6-Dichlorophenol (CAS 87-65-0)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Daphnia magna</i> )	3.4 mg/l, 48 hours
Fish LC50	Medaka, high-eyes ( <i>Oryzias latipes</i> )	3.3 - 11 mg/l, 96 hours
2-Chlorophenol (CAS 95-57-8)		
<b>Aquatic</b>		
Crustacea EC50	Water flea ( <i>Daphnia magna</i> )	3.31 - 4.91 mg/l, 48 hours
Fish LC50	Starry, european flounder ( <i>Platichthys flesus</i> )	6.99 mg/l, 96 hours
3,4,5-Trichlorophenol (CAS 609-19-8)		
<b>Aquatic</b>		
Fish LC50	Starry, european flounder ( <i>Platichthys flesus</i> )	2.31 mg/l, 96 hours
3,4-Dichlorophenol (CAS 95-77-2)		
<b>Aquatic</b>		
Fish LC50	Medaka, high-eyes ( <i>Oryzias latipes</i> )	0.83 - 2.8 mg/l, 96 hours
3,5-Dichlorophenol (CAS 591-35-5)		
<b>Aquatic</b>		
Fish LC50	Medaka, high-eyes ( <i>Oryzias latipes</i> )	1.7 - 3 mg/l, 96 hours

Components	Species	Test Results
3-Chlorophenol (CAS 108-43-0)		
<b>Aquatic</b>		
Fish	LC50	Medaka, high-eyes ( <i>Oryzias latipes</i> )
		3.3 - 6.1 mg/l, 96 hours
4-Chlorophenol (CAS 106-48-9)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )
		2.3 - 2.7 mg/l, 48 hours
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )
		3.1 - 4.8 mg/l, 96 hours
Ethanol, absolute (CAS 64-17-5)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )
		7.7 - 11.2 mg/l, 48 hours
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )
		> 100 mg/l, 96 hours
Pentachlorophenol (CAS 87-86-5)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )
		0.273 - 0.375 mg/l, 48 hours
Fish	LC50	Atlantic salmon ( <i>Salmo salar</i> )
		0.042 - 0.083 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)

2,3,4,5-Tetrachlorophenol	4.21
2,3,4,6-Tetrachlorophenol	4.45
2,3,5,6-Tetrachlorophenol	3.88
2,3,6-Trichlorophenol	3.77
2,3-Dichlorophenol	2.84
2,4,5-Trichlorophenol	3.72
2,4,6-Trichlorophenol	3.69
2,4-Dichlorophenol	3.06
2,5-Dichlorophenol	3.06
2,6-Dichlorophenol	2.75
2-Chlorophenol	2.15
3,4,5-Trichlorophenol	4.01
3,4-Dichlorophenol	3.33
3,5-Dichlorophenol	3.62
3-Chlorophenol	2.5
4-Chlorophenol	2.39
Ethanol, absolute	-0.31
Pentachlorophenol	5.12

**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

<b>Disposal instructions</b>	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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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>	UN1170
<b>UN proper shipping name</b>	Ethanol or Ethyl alcohol or Ethanol solutions or Ethyl alcohol solutions (Ethanol, absolute RQ = 100 LBS), MARINE POLLUTANT (2,4-Dichlorophenol)
<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>	24, IB2, T4, TP1
<b>Packaging exceptions</b>	4b, 150
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

### IATA

<b>UN number</b>	UN1170
<b>UN proper shipping name</b>	Ethanol solution (Ethanol, absolute)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	3L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

### IMDG

<b>UN number</b>	UN1170
<b>UN proper shipping name</b>	ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) (Ethanol, absolute)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-E, S-D
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not established.

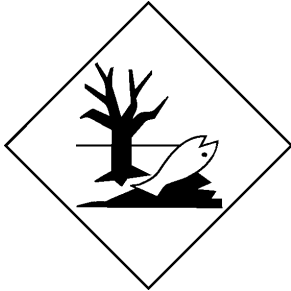
### DOT



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)

2,3,6-Trichlorophenol (CAS 933-75-5)	0.1 % One-Time Export Notification only.
2,3-Dichlorophenol (CAS 576-24-9)	0.1 % One-Time Export Notification only.
2,4,5-Trichlorophenol (CAS 95-95-4)	0.1 % One-Time Export Notification only.
2,4-Dichlorophenol (CAS 120-83-2)	0.1 % One-Time Export Notification only.
2,5-Dichlorophenol (CAS 583-78-8)	0.1 % One-Time Export Notification only.
2,6-Dichlorophenol (CAS 87-65-0)	0.1 % One-Time Export Notification only.
3,4-Dichlorophenol (CAS 95-77-2)	0.1 % One-Time Export Notification only.

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

2,3,4,5-Tetrachlorophenol (CAS 4901-51-3)	Listed.
2,3,4,6-Tetrachlorophenol (CAS 58-90-2)	Listed.
2,3,5,6-Tetrachlorophenol (CAS 935-95-5)	Listed.
2,3,5-Trichlorophenol (CAS 933-78-8)	Listed.
2,3,6-Trichlorophenol (CAS 933-75-5)	Listed.
2,3-Dichlorophenol (CAS 576-24-9)	Listed.
2,4,5-Trichlorophenol (CAS 95-95-4)	Listed.
2,4,6-Trichlorophenol (CAS 88-06-2)	Listed.
2,4-Dichlorophenol (CAS 120-83-2)	Listed.
2,5-Dichlorophenol (CAS 583-78-8)	Listed.
2,6-Dichlorophenol (CAS 87-65-0)	Listed.
2-Chlorophenol (CAS 95-57-8)	Listed.
3,4,5-Trichlorophenol (CAS 609-19-8)	Listed.
3,4-Dichlorophenol (CAS 95-77-2)	Listed.
3,5-Dichlorophenol (CAS 591-35-5)	Listed.
3-Chlorophenol (CAS 108-43-0)	Listed.
4-Chlorophenol (CAS 106-48-9)	Listed.
Ethanol, absolute (CAS 64-17-5)	Listed.
Pentachlorophenol (CAS 87-86-5)	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)

**Hazard categories**                    Immediate Hazard - Yes  
   Delayed Hazard - No  
   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)

Not regulated.

## Other federal regulations

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

2,4,5-Trichlorophenol (CAS 95-95-4)  
2,4,6-Trichlorophenol (CAS 88-06-2)  
Pentachlorophenol (CAS 87-86-5)

### 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 - New Jersey RTK - Substances: Listed substance

2,3,4,5-Tetrachlorophenol (CAS 4901-51-3)  
2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
2,3,5,6-Tetrachlorophenol (CAS 935-95-5)  
2,3,5-Trichlorophenol (CAS 933-78-8)  
2,3,6-Trichlorophenol (CAS 933-75-5)  
2,3-Dichlorophenol (CAS 576-24-9)  
2,4,5-Trichlorophenol (CAS 95-95-4)  
2,4,6-Trichlorophenol (CAS 88-06-2)  
2,4-Dichlorophenol (CAS 120-83-2)  
2,5-Dichlorophenol (CAS 583-78-8)  
2,6-Dichlorophenol (CAS 87-65-0)  
2-Chlorophenol (CAS 95-57-8)  
3,4,5-Trichlorophenol (CAS 609-19-8)  
3,4-Dichlorophenol (CAS 95-77-2)  
3,5-Dichlorophenol (CAS 591-35-5)  
3-Chlorophenol (CAS 108-43-0)  
4-Chlorophenol (CAS 106-48-9)  
Ethanol, absolute (CAS 64-17-5)  
Pentachlorophenol (CAS 87-86-5)

### US - Pennsylvania RTK - Hazardous Substances: Special hazard

2,3,4,5-Tetrachlorophenol (CAS 4901-51-3)  
2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
2,3,5,6-Tetrachlorophenol (CAS 935-95-5)  
2,3,5-Trichlorophenol (CAS 933-78-8)  
2,3,6-Trichlorophenol (CAS 933-75-5)  
2,3-Dichlorophenol (CAS 576-24-9)  
2,4,5-Trichlorophenol (CAS 95-95-4)  
2,4,6-Trichlorophenol (CAS 88-06-2)  
2,4-Dichlorophenol (CAS 120-83-2)  
2,5-Dichlorophenol (CAS 583-78-8)  
2,6-Dichlorophenol (CAS 87-65-0)  
2-Chlorophenol (CAS 95-57-8)  
3,4,5-Trichlorophenol (CAS 609-19-8)  
3,4-Dichlorophenol (CAS 95-77-2)  
3,5-Dichlorophenol (CAS 591-35-5)  
3-Chlorophenol (CAS 108-43-0)  
4-Chlorophenol (CAS 106-48-9)  
Pentachlorophenol (CAS 87-86-5)

**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))**

2,4-Dichlorophenol (CAS 120-83-2)

2,5-Dichlorophenol (CAS 583-78-8)

**US. Massachusetts RTK - Substance List**

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)

2,3,5-Trichlorophenol (CAS 933-78-8)

2,3,6-Trichlorophenol (CAS 933-75-5)

2,4,5-Trichlorophenol (CAS 95-95-4)

2,4,6-Trichlorophenol (CAS 88-06-2)

2,4-Dichlorophenol (CAS 120-83-2)

2,6-Dichlorophenol (CAS 87-65-0)

2-Chlorophenol (CAS 95-57-8)

3,4,5-Trichlorophenol (CAS 609-19-8)

4-Chlorophenol (CAS 106-48-9)

Ethanol, absolute (CAS 64-17-5)

Pentachlorophenol (CAS 87-86-5)

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

2,3,4,5-Tetrachlorophenol (CAS 4901-51-3)

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)

2,3,5,6-Tetrachlorophenol (CAS 935-95-5)

2,3,5-Trichlorophenol (CAS 933-78-8)

2,3,6-Trichlorophenol (CAS 933-75-5)

2,3-Dichlorophenol (CAS 576-24-9)

2,4,5-Trichlorophenol (CAS 95-95-4)

2,4,6-Trichlorophenol (CAS 88-06-2)

2,4-Dichlorophenol (CAS 120-83-2)

2,5-Dichlorophenol (CAS 583-78-8)

2,6-Dichlorophenol (CAS 87-65-0)

2-Chlorophenol (CAS 95-57-8)

3,4,5-Trichlorophenol (CAS 609-19-8)

3,4-Dichlorophenol (CAS 95-77-2)

3,5-Dichlorophenol (CAS 591-35-5)

3-Chlorophenol (CAS 108-43-0)

4-Chlorophenol (CAS 106-48-9)

Pentachlorophenol (CAS 87-86-5)

**US. Pennsylvania RTK - Hazardous Substances**

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)

2,3,5-Trichlorophenol (CAS 933-78-8)

2,3,6-Trichlorophenol (CAS 933-75-5)

2,4,5-Trichlorophenol (CAS 95-95-4)

2,4,6-Trichlorophenol (CAS 88-06-2)

2,4-Dichlorophenol (CAS 120-83-2)

2,6-Dichlorophenol (CAS 87-65-0)

2-Chlorophenol (CAS 95-57-8)

3,4,5-Trichlorophenol (CAS 609-19-8)

4-Chlorophenol (CAS 106-48-9)

Ethanol, absolute (CAS 64-17-5)

Pentachlorophenol (CAS 87-86-5)

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

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)

2,3,5-Trichlorophenol (CAS 933-78-8)

2,3,6-Trichlorophenol (CAS 933-75-5)

2,4,5-Trichlorophenol (CAS 95-95-4)

2,4,6-Trichlorophenol (CAS 88-06-2)

2,4-Dichlorophenol (CAS 120-83-2)

2,6-Dichlorophenol (CAS 87-65-0)

2-Chlorophenol (CAS 95-57-8)

3,4,5-Trichlorophenol (CAS 609-19-8)

4-Chlorophenol (CAS 106-48-9)

Ethanol, absolute (CAS 64-17-5)

Pentachlorophenol (CAS 87-86-5)

## US. Rhode Island RTK

2,3,4,5-Tetrachlorophenol (CAS 4901-51-3)  
2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
2,3,5,6-Tetrachlorophenol (CAS 935-95-5)  
2,3,5-Trichlorophenol (CAS 933-78-8)  
2,3,6-Trichlorophenol (CAS 933-75-5)  
2,3-Dichlorophenol (CAS 576-24-9)  
2,4,5-Trichlorophenol (CAS 95-95-4)  
2,4,6-Trichlorophenol (CAS 88-06-2)  
2,4-Dichlorophenol (CAS 120-83-2)  
2,5-Dichlorophenol (CAS 583-78-8)  
2,6-Dichlorophenol (CAS 87-65-0)  
2-Chlorophenol (CAS 95-57-8)  
3,4,5-Trichlorophenol (CAS 609-19-8)  
3,4-Dichlorophenol (CAS 95-77-2)  
3,5-Dichlorophenol (CAS 591-35-5)  
3-Chlorophenol (CAS 108-43-0)  
4-Chlorophenol (CAS 106-48-9)  
Ethanol, absolute (CAS 64-17-5)  
Pentachlorophenol (CAS 87-86-5)

## 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

2,4,6-Trichlorophenol (CAS 88-06-2)	Listed: January 1, 1988
Ethanol, absolute (CAS 64-17-5)	Listed: April 29, 2011
	Listed: July 1, 1988
Pentachlorophenol (CAS 87-86-5)	Listed: January 1, 1990

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

Ethanol, absolute (CAS 64-17-5)	Listed: October 1, 1987
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## 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)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

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

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

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

Issue date	01-23-2017
Revision date	01-31-2017
Version #	02
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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**Revision Information**