

## SAFETY DATA SHEET

## 1. Identification

**Product identifier** Canadian Drinking Water Phenoxyacid Herbicide Mixture

**Other means of identification**

**Item** M-CSCAN2B4

**Recommended use** For Laboratory Use Only

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information****Manufacturer**

<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 4
	Serious eye damage/eye irritation	Category 2A
	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
<b>OSHA defined hazards</b>	Not classified.	

**Label elements**

**Signal word** Danger

**Hazard statement** Highly flammable liquid and vapor. Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause drowsiness or dizziness. Suspected of causing cancer. May damage fertility or the unborn child. Toxic to aquatic life. 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. Avoid breathing 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. In case of inadequate ventilation wear respiratory 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. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Rinse mouth. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. If experiencing respiratory symptoms: Call a poison center/doctor. Wash contaminated clothing 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

0.3% of the mixture consists of component(s) of unknown acute inhalation toxicity. 98.9% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 98.9% 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	%
Acetone		67-64-1	98.9
2,3,4,6-Tetrachlorophenol		58-90-2	0.1
2,4,5-T (TM)		93-76-5	0.1
2,4,6-Trichlorophenol		88-06-2	0.1
2,4-D		94-75-7	0.1
2,4-Dichlorophenol		120-83-2	0.1
Bromoxynil		1689-84-5	0.1
Dicamba		1918-00-9	0.1
Diclofop methyl		51338-27-3	0.1
Dinoseb		88-85-7	0.1
Pentachlorophenol		87-86-5	0.1
Picloram		1918-02-1	0.1

## 4. First-aid measures

### Inhalation

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

### 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.

<b>Most important symptoms/effects, acute and delayed</b>	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash.
<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.

## 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>	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. Avoid inhalation of vapors and spray mists. 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.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	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. Avoid inhalation of vapors and spray mists. 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	Form
2,4,5-T (TM) (CAS 93-76-5)	PEL	10 mg/m <sup>3</sup>	
2,4-D (CAS 94-75-7)	PEL	10 mg/m <sup>3</sup>	
Acetone (CAS 67-64-1)	PEL	2400 mg/m <sup>3</sup>	
		1000 ppm	
Pentachlorophenol (CAS 87-86-5)	PEL	0.5 mg/m <sup>3</sup>	
Picloram (CAS 1918-02-1)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2,4,5-T (TM) (CAS 93-76-5)	TWA	10 mg/m <sup>3</sup>	
2,4-D (CAS 94-75-7)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 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.
Picloram (CAS 1918-02-1)	TWA	10 mg/m <sup>3</sup>	

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

Components	Type	Value
2,4,5-T (TM) (CAS 93-76-5)	TWA	10 mg/m <sup>3</sup>
2,4-D (CAS 94-75-7)	TWA	10 mg/m <sup>3</sup>
Acetone (CAS 67-64-1)	TWA	590 mg/m <sup>3</sup>
		250 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

#### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*

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

### 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.

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

2,4-D (CAS 94-75-7) Can be absorbed through the skin.

Pentachlorophenol (CAS 87-86-5) Can be absorbed through the skin.

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

Pentachlorophenol (CAS 87-86-5) Can be absorbed through the skin.

#### US WEEL Guides: Skin designation

2,4-Dichlorophenol (CAS 120-83-2) Can be absorbed through the skin.

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

Pentachlorophenol (CAS 87-86-5) Can be absorbed through the skin.

### Appropriate engineering controls

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

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

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

#### Skin protection

**Hand protection** Wear appropriate chemical resistant gloves. 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** -138.46 °F (-94.7 °C) estimated

**Initial boiling point and boiling range** 132.89 °F (56.05 °C) estimated

**Flash point** -4.0 °F (-20.0 °C) estimated

<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	2.6 % estimated
<b>Flammability limit - upper (%)</b>	12.8 % estimated
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	309.3 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>	869 °F (465 °C) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	0.79624 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>	98.9 % estimated
<b>Specific gravity</b>	0.8 estimated
<b>VOC (Weight %)</b>	99.1 % 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>	Harmful if inhaled. May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Skin contact</b>	May cause an allergic skin reaction.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	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. Difficulty in breathing. May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

**Acute toxicity** Harmful if inhaled. Harmful if swallowed. Narcotic effects. May cause an allergic skin reaction.

Components	Species	Test Results
2,3,4,6-Tetrachlorophenol (CAS 58-90-2)		
<b><u>Acute</u></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
2,4,5-T (TM) (CAS 93-76-5)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Dog	> 100 mg/kg
	Guinea pig	381 mg/kg
	Mouse	389 mg/kg
	Rat	500 mg/kg
2,4,6-Trichlorophenol (CAS 88-06-2)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Rat	820 mg/kg
2,4-D (CAS 94-75-7)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rabbit	1400 mg/kg
	Rat	2000 mg/kg
<b>Oral</b>		
LD50	Dog	100 mg/kg
	Fischer 344 rat	270 - 1103 mg/kg
	Guinea pig	469 mg/kg
	Hamster	500 mg/kg
	Mouse	300 mg/kg
	Rabbit	800 mg/kg
	Rat	275 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
Acetone (CAS 67-64-1)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Guinea pig	> 7426 mg/kg, 24 Hours
		> 9.4 ml/kg, 24 Hours
	Rabbit	> 7426 mg/kg, 24 Hours

Components	Species	Test Results
		> 9.4 ml/kg, 24 Hours
<b>Inhalation</b>		
<i>Vapor</i>		
LC50	Rat	55700 ppm, 3 Hours
		132 mg/l, 3 Hours
LC50	Rat	76 mg/l, 4 Hours
<i>Vapor</i>		
LC50	Rat	50.1 mg/l
LC50	Rat	50.1 mg/l, 8 Hours
<b>Oral</b>		
LD50	Mouse	5.2 g/kg
	Rat	5800 mg/kg
		2.2 ml/kg
Bromoxynil (CAS 1689-84-5)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	2000 mg/kg
<b>Oral</b>		
LD50	Mouse	110 mg/kg
	Rat	190 mg/kg
Dicamba (CAS 1918-00-9)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	2000 mg/kg
<b>Oral</b>		
LD50	Guinea pig	566 - 3000 mg/kg
	Rabbit	566 - 2000 mg/kg
	Rat	757 mg/kg
Diclofop methyl (CAS 51338-27-3)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	> 5000 mg/kg
<b>Oral</b>		
LD50	Rat	580 mg/kg
Dinoseb (CAS 88-85-7)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Guinea pig	100 mg/kg
	Rat	30 mg/kg, 24 Hours
		0.12 ml/kg, 24 Hours
<b>Oral</b>		
LD100	Rat	60 mg/kg
LD50	Rat	27 mg/kg
Pentachlorophenol (CAS 87-86-5)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	96 mg/kg
<b>Oral</b>		
LD50	Rat	146 mg/kg



Components	Species	Test Results
Picloram (CAS 1918-02-1)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Cattle	> 750 mg/kg
	Rat	8200 mg/kg
	Sheep	> 100 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>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Skin sensitization</b>	May cause an allergic skin reaction.
<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>	Suspected of causing cancer.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)	2B Possibly carcinogenic to humans.
2,4,5-T (TM) (CAS 93-76-5)	2B Possibly carcinogenic to humans.
2,4,6-Trichlorophenol (CAS 88-06-2)	2B Possibly carcinogenic to humans.
2,4-D (CAS 94-75-7)	2B Possibly carcinogenic to humans.
2,4-Dichlorophenol (CAS 120-83-2)	2B Possibly carcinogenic to humans.
Diclofop methyl (CAS 51338-27-3)	2B Possibly carcinogenic to humans.
Pentachlorophenol (CAS 87-86-5)	2B Possibly carcinogenic to humans.
Picloram (CAS 1918-02-1)	3 Not classifiable as to carcinogenicity 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.

<b>Reproductive toxicity</b>	May damage fertility or the unborn child.
<b>Specific target organ toxicity - single exposure</b>	May cause drowsiness and dizziness.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

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

Components	Species	Test Results
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		
2,4,5-T (TM) (CAS 93-76-5)		
<b>Aquatic</b>		
Fish	LC50	Carp (Cyprinus carpio)
5.3 mg/l, 96 hours		
2,4,6-Trichlorophenol (CAS 88-06-2)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna)
1.8 - 2.6 mg/l, 48 hours		
Fish	LC50	Bluegill (Lepomis macrochirus)
0.35 - 0.49 mg/l, 96 hours		

Components	Species		Test Results
2,4-D (CAS 94-75-7)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia pulex)	2.4 - 4.3 mg/l, 48 hours
Fish	LC50	Fish (Labeo boga)	3.8 mg/l, 96 hours
2,4-Dichlorophenol (CAS 120-83-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	1.2 - 1.7 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	1.6 - 2.6 mg/l, 96 hours
Acetone (CAS 67-64-1)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Bromoxynil (CAS 1689-84-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.045 - 0.07 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	11.5 mg/l, 96 hours
Dicamba (CAS 1918-00-9)			
<b>Aquatic</b>			
Crustacea	EC50	Ostracod, Seed shrimp (Cypridopsis vidua)	> 100 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	28 mg/l, 96 hours
Diclofop methyl (CAS 51338-27-3)			
<b>Aquatic</b>			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.189 - 0.33 mg/l, 96 hours
Dinoseb (CAS 88-85-7)			
<b>Aquatic</b>			
Fish	LC50	Lake trout, siscowet (Salvelinus namaycush)	0.024 - 0.054 mg/l, 96 hours
Pentachlorophenol (CAS 87-86-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.273 - 0.375 mg/l, 48 hours
Fish	LC50	Atlantic salmon (Salmo salar)	0.042 - 0.083 mg/l, 96 hours
Picloram (CAS 1918-02-1)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	59 - 97 mg/l, 48 hours
Fish	LC50	Lake trout, siscowet (Salvelinus namaycush)	1.6 - 2.9 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)**

2,3,4,6-Tetrachlorophenol	4.45
2,4,5-T (TM)	4
2,4,6-Trichlorophenol	3.69
2,4-D	2.81
2,4-Dichlorophenol	3.06
Acetone	-0.24
Bromoxynil	2.8
Dicamba	2.21

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

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****Disposal instructions**

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

**Local disposal regulations**

Dispose in accordance with all applicable regulations.

**Hazardous waste code**

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

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

Dinoseb (CAS 88-85-7)

P020

**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****UN number**

UN1090

**UN proper shipping name**

Acetone, solution (Acetone RQ = 5056 LBS), MARINE POLLUTANT (2,4-Dichlorophenol)

**Transport hazard class(es)****Class**

3

**Subsidiary risk**

-

**Label(s)**

3

**Packing group**

II

**Environmental hazards****Marine pollutant**

Yes

**Special precautions for user**

Read safety instructions, SDS and emergency procedures before handling.

**Special provisions**

IB2, T4, TP1

**Packaging exceptions**

150

**Packaging non bulk**

202

**Packaging bulk**

242

**IATA****UN number**

UN1090

**UN proper shipping name**

Acetone solution (Acetone)

**Transport hazard class(es)****Class**

3

**Subsidiary risk**

-

**Packing group**

II

**Environmental hazards**

Yes

**ERG Code**

3H

**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**

UN1090

**UN proper shipping name**

ACETONE SOLUTION (Acetone), 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.

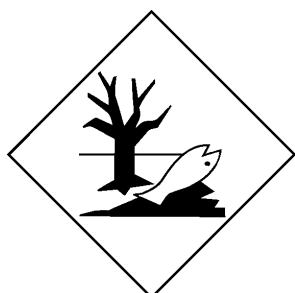
**DOT**



**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)**

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

0.1 % One-Time Export Notification only.

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

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

Listed.

2,4,5-T (TM) (CAS 93-76-5)

Listed.

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

Listed.

2,4-D (CAS 94-75-7)

Listed.

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

Listed.

Acetone (CAS 67-64-1)

Listed.

Dicamba (CAS 1918-00-9)

Listed.

Dinoseb (CAS 88-85-7)

Listed.

Pentachlorophenol (CAS 87-86-5)

Listed.

**SARA 304 Emergency release notification**

Dinoseb (CAS 88-85-7)

1000 LBS

**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 - Yes  
 Fire Hazard - Yes  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Dinoseb	88-85-7	1000		100 lbs	10000 lbs

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
2,3,4,6-Tetrachlorophenol	58-90-2	0.1
2,4,6-Trichlorophenol	88-06-2	0.1
2,4-D	94-75-7	0.1
Pentachlorophenol	87-86-5	0.1

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

2,4,6-Trichlorophenol (CAS 88-06-2)  
 2,4-D (CAS 94-75-7)  
 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.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Acetone (CAS 67-64-1) 6532

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

Acetone (CAS 67-64-1) 35 %WV

**DEA Exempt Chemical Mixtures Code Number**

Acetone (CAS 67-64-1) 6532

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

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
 2,4,5-T (TM) (CAS 93-76-5)  
 2,4,6-Trichlorophenol (CAS 88-06-2)  
 2,4-D (CAS 94-75-7)  
 2,4-Dichlorophenol (CAS 120-83-2)  
 Acetone (CAS 67-64-1)  
 Bromoxynil (CAS 1689-84-5)  
 Dicamba (CAS 1918-00-9)  
 Diclofop methyl (CAS 51338-27-3)  
 Dinoseb (CAS 88-85-7)  
 Pentachlorophenol (CAS 87-86-5)  
 Picloram (CAS 1918-02-1)

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

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
 2,4,6-Trichlorophenol (CAS 88-06-2)  
 2,4-Dichlorophenol (CAS 120-83-2)  
 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)  
Acetone (CAS 67-64-1)

**US. Massachusetts RTK - Substance List**

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
2,4,5-T (TM) (CAS 93-76-5)  
2,4,6-Trichlorophenol (CAS 88-06-2)  
2,4-D (CAS 94-75-7)  
2,4-Dichlorophenol (CAS 120-83-2)  
Acetone (CAS 67-64-1)  
Dicamba (CAS 1918-00-9)  
Diclofop methyl (CAS 51338-27-3)  
Dinoseb (CAS 88-85-7)  
Pentachlorophenol (CAS 87-86-5)  
Picloram (CAS 1918-02-1)

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

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
2,4,5-T (TM) (CAS 93-76-5)  
2,4,6-Trichlorophenol (CAS 88-06-2)  
2,4-D (CAS 94-75-7)  
2,4-Dichlorophenol (CAS 120-83-2)  
Bromoxynil (CAS 1689-84-5)  
Dicamba (CAS 1918-00-9)  
Diclofop methyl (CAS 51338-27-3)  
Dinoseb (CAS 88-85-7)  
Pentachlorophenol (CAS 87-86-5)  
Picloram (CAS 1918-02-1)

**US. Pennsylvania RTK - Hazardous Substances**

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
2,4,5-T (TM) (CAS 93-76-5)  
2,4,6-Trichlorophenol (CAS 88-06-2)  
2,4-D (CAS 94-75-7)  
2,4-Dichlorophenol (CAS 120-83-2)  
Acetone (CAS 67-64-1)  
Dicamba (CAS 1918-00-9)  
Dinoseb (CAS 88-85-7)  
Pentachlorophenol (CAS 87-86-5)  
Picloram (CAS 1918-02-1)

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

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
2,4,5-T (TM) (CAS 93-76-5)  
2,4,6-Trichlorophenol (CAS 88-06-2)  
2,4-D (CAS 94-75-7)  
2,4-Dichlorophenol (CAS 120-83-2)  
Acetone (CAS 67-64-1)  
Dicamba (CAS 1918-00-9)  
Dinoseb (CAS 88-85-7)  
Pentachlorophenol (CAS 87-86-5)  
Picloram (CAS 1918-02-1)

**US. Rhode Island RTK**

2,3,4,6-Tetrachlorophenol (CAS 58-90-2)  
2,4,5-T (TM) (CAS 93-76-5)  
2,4,6-Trichlorophenol (CAS 88-06-2)  
2,4-D (CAS 94-75-7)  
2,4-Dichlorophenol (CAS 120-83-2)  
Acetone (CAS 67-64-1)  
Pentachlorophenol (CAS 87-86-5)  
Picloram (CAS 1918-02-1)

**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
Diclofop methyl (CAS 51338-27-3)	Listed: April 6, 2010
Pentachlorophenol (CAS 87-86-5)	Listed: January 1, 1990

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

Bromoxynil (CAS 1689-84-5)	Listed: October 1, 1990
Diclofop methyl (CAS 51338-27-3)	Listed: March 5, 1999
Dinoseb (CAS 88-85-7)	Listed: January 1, 1989

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

Dinoseb (CAS 88-85-7)	Listed: January 1, 1989
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**International Inventories**

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

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

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

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

**Issue date** 02-03-2017  
**Version #** 01  
**NFPA ratings** 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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