SAFETY DATA SHEET

1. Identification

Product identifier **DIN 38407 Pesticide Standard Mixture - 1**

Other means of identification

Item M-DIN38407PS1J10

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 1
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity (fertility)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 1
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. Fatal if swallowed. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility. Causes damage to organs through prolonged or repeated exposure. Very 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. 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. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Rinse mouth. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. 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	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
n-Hexane		110-54-3	99.98
4,4'-DDD		72-54-8	0.001
4,4'-DDE		72-55-9	0.001
4,4'-DDT		50-29-3	0.001
a-Endosulfan		959-98-8	0.001
Aldrin (TM)		309-00-2	0.001
b-Endosulfan		33213-65-9	0.001
BHC (alpha isomer)		319-84-6	0.001
BHC (beta isomer)		319-85-7	0.001
Dieldrin		60-57-1	0.001
Endrin		72-20-8	0.001
Heptachlor		76-44-8	0.001
Heptachlor epoxide (Isomer B)		1024-57-3	0.001
Lindane (BHC gamma isomer)		58-89-9	0.001
Methoxychlor		72-43-5	0.001
o,p'-DDE		3424-82-6	0.001
o,p'-DDT		789-02-6	0.001
trans-Heptachlor epoxide		28044-83-9	0.001

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. 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	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
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. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	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.
General information	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

Suitable extinguishing media	Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	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.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	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 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.
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. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. 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. 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
4,4'-DDT (CAS 50-29-3)	PEL	1 mg/m3	
Aldrin (TM) (CAS 309-00-2)	PEL	0.25 mg/m3	
Dieldrin (CAS 60-57-1)	PEL	0.25 mg/m3	
Endrin (CAS 72-20-8)	PEL	0.1 mg/m3	
Heptachlor (CAS 76-44-8)	PEL	0.5 mg/m3	
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	PEL	0.5 mg/m3	
Lindane (BHC gamma isomer) (CAS 58-89-9)	PEL	0.5 mg/m3	
Methoxychlor (CAS 72-43-5)	PEL	15 mg/m3	Total dust.
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3 500 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
4,4'-DDT (CAS 50-29-3)	TWA	1 mg/m3	
a-Endosulfan (CAS 959-98-8)	TWA	0.1 mg/m3	Inhalable fraction and vapor.
Aldrin (TM) (CAS 309-00-2)	TWA	0.05 mg/m3	Inhalable fraction and vapor.
b-Endosulfan (CAS 33213-65-9)	TWA	0.1 mg/m3	Inhalable fraction and vapor.
Dieldrin (CAS 60-57-1)	TWA	0.1 mg/m3	Inhalable fraction and vapor.
Endrin (CAS 72-20-8)	TWA	0.1 mg/m3	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Heptachlor (CAS 76-44-8)	TWA	0.05 mg/m3	
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	TWA	0.05 mg/m3	
Lindane (BHC gamma isomer) (CAS 58-89-9)	TWA	0.5 mg/m3	
Methoxychlor (CAS 72-43-5)	TWA	10 mg/m3	
n-Hexane (CAS 110-54-3)	TWA	50 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
4,4'-DDT (CAS 50-29-3)	TWA	0.5 mg/m3
a-Endosulfan (CAS 959-98-8)	TWA	0.1 mg/m3
Aldrin (TM) (CAS 309-00-2)	TWA	0.25 mg/m3
b-Endosulfan (CAS 33213-65-9)	TWA	0.1 mg/m3
Dieldrin (CAS 60-57-1)	TWA	0.25 mg/m3
Endrin (CAS 72-20-8)	TWA	0.1 mg/m3
Heptachlor (CAS 76-44-8)	TWA	0.5 mg/m3
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	TWA	0.5 mg/m3
Lindane (BHC gamma isomer) (CAS 58-89-9)	TWA	0.5 mg/m3
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3 50 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedion, without hydrolysis	Urine	*

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

Exposure guidelines

US - California OELs: Skin designation

4,4'-DDT (CAS 50-29-3)	Can be absorbed through the skin.
a-Endosulfan (CAS 959-98-8)	Can be absorbed through the skin.
Aldrin (TM) (CAS 309-00-2)	Can be absorbed through the skin.
b-Endosulfan (CAS 33213-65-9)	Can be absorbed through the skin.
Dieldrin (CAS 60-57-1)	Can be absorbed through the skin.
Endrin (CAS 72-20-8)	Can be absorbed through the skin.
Heptachlor (CAS 76-44-8)	Can be absorbed through the skin.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Can be absorbed through the skin.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

a-Endosulfan (CAS 959-98-8)	Skin designation applies.
Aldrin (TM) (CAS 309-00-2)	Skin designation applies.
b-Endosulfan (CAS 33213-65-9)	Skin designation applies.
Dieldrin (CAS 60-57-1)	Skin designation applies.
Endrin (CAS 72-20-8)	Skin designation applies.
Heptachlor (CAS 76-44-8)	Skin designation applies.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Skin designation applies.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Skin designation applies.

US - Tennessee OELs: Skin designation

4,4'-DDT (CAS 50-29-3)	Can be absorbed through the skin.
a-Endosulfan (CAS 959-98-8)	Can be absorbed through the skin.
Aldrin (TM) (CAS 309-00-2)	Can be absorbed through the skin.
b-Endosulfan (CAS 33213-65-9)	Can be absorbed through the skin.
Dieldrin (CAS 60-57-1)	Can be absorbed through the skin.

Endrin (CAS 72-20-8)	Can be absorbed through the skin.
Heptachlor (CAS 76-44-8)	Can be absorbed through the skin.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Can be absorbed through the skin.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

a-Endosulfan (CAS 959-98-8)	Can be absorbed through the skin.
Aldrin (TM) (CAS 309-00-2)	Can be absorbed through the skin.
b-Endosulfan (CAS 33213-65-9)	Can be absorbed through the skin.
Dieldrin (CAS 60-57-1)	Can be absorbed through the skin.
Endrin (CAS 72-20-8)	Can be absorbed through the skin.
Heptachlor (CAS 76-44-8)	Can be absorbed through the skin.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Can be absorbed through the skin.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

a-Endosulfan (CAS 959-98-8)	Can be absorbed through the skin.
Aldrin (TM) (CAS 309-00-2)	Can be absorbed through the skin.
b-Endosulfan (CAS 33213-65-9)	Can be absorbed through the skin.
Dieldrin (CAS 60-57-1)	Can be absorbed through the skin.
Endrin (CAS 72-20-8)	Can be absorbed through the skin.
Heptachlor (CAS 76-44-8)	Can be absorbed through the skin.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Can be absorbed through the skin.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Can be absorbed through the skin.

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

4,4'-DDT (CAS 50-29-3)	Can be absorbed through the skin.
Aldrin (TM) (CAS 309-00-2)	Can be absorbed through the skin.
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Endrin (CAS 72-20-8)	Can be absorbed through the skin.
Heptachlor (CAS 76-44-8)	Can be absorbed through the skin.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Can be absorbed through the skin.
Lindane (BHC gamma isomer) (CAS 58-89-9)	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. 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.

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 -137.74 °F (-94.3 °C) estimated

Initial boiling point and boiling range	155.66 °F (68.7 °C) estimated
Flash point	-7.0 °F (-21.7 °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	202.64 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	437 °F (225 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.62021 g/cm3 estimated
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Oxidizing properties	Not oxidizing.
Specific gravity	1.62 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	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.
Eye contact	Causes serious eye irritation.
Ingestion	Fatal 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.

Information on toxicological effects

Acute toxicity	Fatal if swallowed. Narcotic effects.

Components	Species	Test Results
4,4'-DDD (CAS 72-54-8)		
Acute		
Dermal		
LD50	Rabbit	1200 mg/kg
Oral		
LD50	Mouse	1466 mg/kg
	Rat	113 mg/kg
4,4'-DDE (CAS 72-55-9)		
Acute		
Oral		
LD50	Mouse	700 mg/kg
	Rat	880 mg/kg
4,4'-DDT (CAS 50-29-3)		
Acute		
Dermal		
LD50	Guinea pig	1000 mg/kg
	Mouse	250 mg/kg
	Rabbit	300 mg/kg
	Rat	1931 mg/kg
Oral		
LD50	Dog	500 mg/kg
	Goat	> 1000 mg/kg
	Guinea pig	250 mg/kg
	Mouse	150 mg/kg
	Rabbit	300 mg/kg
	Rat	87 mg/kg
	Sheep	> 1000 mg/kg
a-Endosulfan (CAS 959-98-8)		
Acute		
Dermal		
LD50	Rabbit	90 mg/kg
	Rat	34 mg/kg
Inhalation		
LC50	Rat	0.08 mg/l, 4 Hours
Oral		
LD50	Cat	2 mg/kg
	Dog	76.7 mg/kg
	Hamster	118 mg/kg
	Mouse	7.36 mg/kg
	Rabbit	28 mg/kg
	Rat	18 mg/kg
Aldrin (TM) (CAS 309-00-2)		
Acute		
Dermal		
LD50	Rabbit	150 mg/kg
	Rat	98 mg/kg
Oral		
LD50	Mouse	44 mg/kg

Components	Species	Test Results
	Rat	39 mg/kg
b-Endosulfan (CAS 33213-65-9)		
Acute		
Dermal		
LD50	Rabbit	90 mg/kg
	Rat	34 mg/kg
Inhalation		
LC50	Rat	0.08 mg/l, 4 Hours
Oral		
LD50	Cat	2 mg/kg
	Dog	76.7 mg/kg
	Hamster	118 mg/kg
	Mouse	7.36 mg/kg
	Rabbit	28 mg/kg
	Rat	18 mg/kg
BHC (alpha isomer) (CAS 319-84-6)		
Acute		
Dermal		
LD50	Rat	0.9 mg/kg
Oral		
LD50	Rat	177 mg/kg
BHC (beta isomer) (CAS 319-85-7)		
Acute		
Dermal		
LD50	Rat	0.9 mg/kg
Oral		
LD50	Mouse	1500 mg/kg
	Rat	6 g/kg
Dieldrin (CAS 60-57-1)		
Acute		
Dermal		
LD50	Rat	56 mg/kg
Oral		
LD50	Dog	65 mg/kg
	Domestic goat	100 - 200 mg/kg
	Monkey	3 mg/kg
	Mouse	38 mg/kg
	Rat	24 mg/kg
	Sheep	50 - 75 mg/kg
Endrin (CAS 72-20-8)		
Acute		
Dermal		
LD50	Rabbit	60 mg/kg
	Rat	12 mg/kg
Oral		
LD50	Guinea pig	16 mg/kg
	Monkey	3 mg/kg
	Mouse	1.3 mg/kg

Components	Species	Test Results
	Rabbit	7 - 10 mg/kg
	Rat	3 mg/kg

Heptachlor (CAS 76-44-8)

Acute

Dermal

LD50	Guinea pig	116 mg/kg
	Rabbit	500 - 2000 mg/kg
	Rat	119 mg/kg

Inhalation

LC50	Rat	200 mg/l, 4 Hours

Oral

LD50	Cat	67 mg/kg
	Guinea pig	116 mg/kg
	Hamster	100 - 160 mg/kg
	Mouse	68 - 180 mg/kg
	Rabbit	80 - 90 mg/kg
	Rat	40 - 100 mg/kg
TD	Calf	20 mg/kg

Heptachlor epoxide (Isomer B) (CAS 1024-57-3)

Acute

Dermal

LD50	Guinea pig	116 mg/kg
	Rabbit	500 - 2000 mg/kg
	Rat	119 mg/kg

Inhalation

LC50	Rat	200 mg/l, 4 Hours

Oral

LD50	Cat	67 mg/kg
	Guinea pig	116 mg/kg
	Hamster	100 - 160 mg/kg
	Mouse	68 - 180 mg/kg
	Rabbit	80 - 90 mg/kg
	Rat	40 - 100 mg/kg
TD	Calf	20 mg/kg

Lindane (BHC gamma isomer) (CAS 58-89-9)

Acute

Dermal

LD50	Rabbit	50 mg/kg
	Rat	500 mg/kg

Inhalation

LC50	Rat	1.56 mg/l

Oral

LD50	Dog	40 mg/kg
	Guinea pig	127 mg/kg
	Hamster	360 mg/kg
	Mouse	44 mg/kg
	Rabbit	50 mg/kg

Components	Species	Test Results
	Rat	76 mg/kg
Methoxychlor (CAS 72-43-5)		
Acute		
Oral		
LD50	Mouse	2900 mg/kg
	Rat	3460 mg/kg
n-Hexane (CAS 110-54-3)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
		> 5 ml/kg
Inhalation		
LC50	Mouse	48000 ppm, 4 Hours
	Rat	> 5000 ppm, 24 Hours
		> 31.86 mg/l
		73860 ppm, 4 Hours
Oral		
LD50	Rat	24 ml/kg
		24 mg/kg
	Wistar rat	49 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 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

4,4'-DDT (CAS 50-29-3)	2A Probably carcinogenic to humans.
Aldrin (TM) (CAS 309-00-2)	3 Not classifiable as to carcinogenicity to humans.
BHC (alpha isomer) (CAS 319-84-6)	2B Possibly carcinogenic to humans.
BHC (beta isomer) (CAS 319-85-7)	2B Possibly carcinogenic to humans.
Dieldrin (CAS 60-57-1)	3 Not classifiable as to carcinogenicity to humans.
Endrin (CAS 72-20-8)	3 Not classifiable as to carcinogenicity to humans.
Heptachlor (CAS 76-44-8)	2B Possibly carcinogenic to humans.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	2B Possibly carcinogenic to humans.
Lindane (BHC gamma isomer) (CAS 58-89-9)	1 Carcinogenic to humans.
Methoxychlor (CAS 72-43-5)	3 Not classifiable as to carcinogenicity to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

4,4'-DDT (CAS 50-29-3)	Reasonably Anticipated to be a Human Carcinogen.
BHC (alpha isomer) (CAS 319-84-6)	Reasonably Anticipated to be a Human Carcinogen.
BHC (beta isomer) (CAS 319-85-7)	Reasonably Anticipated to be a Human Carcinogen.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Reasonably Anticipated to be a Human Carcinogen.

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

Not listed.

Reproductive toxicity Suspected of damaging fertility.

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

Specific target organ toxicity - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Causes damage to organs through prolonged or repeated exposure. 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
4,4'-DDD (CAS 72-54-8)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	0.0023 - 0.0044 mg/l, 48 hours
Fish	LC50	Walleye (Stizostedion vitreum vitreum)	0.011 - 0.019 mg/l, 96 hours
4,4'-DDE (CAS 72-55-9)			
Aquatic			
Crustacea	EC50	Brown shrimp (Penaeus aztecus)	0.028 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.026 - 0.04 mg/l, 96 hours
4,4'-DDT (CAS 50-29-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.0005 - 0.001 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.0013 - 0.002 mg/l, 96 hours
a-Endosulfan (CAS 959-98-8)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia carinata)	0.18 mg/l, 48 hours
Fish	LC50	Snake-head catfish (Channa punctata)	0.0001 - 0.0002 mg/l, 96 hours
Aldrin (TM) (CAS 309-00-2)			
Aquatic			
Crustacea	EC50	Ostracod, Seed shrimp (Cypridopsis vidua)	0.015 - 0.021 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.0023 - 0.0045 mg/l, 96 hours
b-Endosulfan (CAS 33213-65-9)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia carinata)	0.18 mg/l, 48 hours
Fish	LC50	Snake-head catfish (Channa punctata)	0.0066 - 0.0067 mg/l, 96 hours
BHC (alpha isomer) (CAS 319-84-6)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.6 - 1 mg/l, 48 hours
Fish	LC50	Zebra danio (Danio rerio)	0.82 - 1.51 mg/l, 96 hours
BHC (beta isomer) (CAS 319-85-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	0.68 mg/l, 48 hours
Fish	LC50	Guppy (Poecilia reticulata)	1 - 3.55 mg/l, 96 hours
Dieldrin (CAS 60-57-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.074 - 0.0854 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.001 - 0.0013 mg/l, 96 hours

Components		Species	Test Results
Endrin (CAS 72-20-8)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	0.013 - 0.03 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	0.0002 - 0.0006 mg/l, 96 hours
Heptachlor (CAS 76-44-8)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	0.021 - 0.063 mg/l, 48 hours
Fish	LC50	Pinfish (Lagodon rhomboides)	0.002 - 0.0088 mg/l, 96 hours
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	0.021 - 0.063 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.0039 - 0.0072 mg/l, 96 hours
Lindane (BHC gamma isomer) (CAS 58-89-9)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	0.386 - 0.547 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.02 - 0.027 mg/l, 96 hours
Methoxychlor (CAS 72-43-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	0.0006 - 0.0011 mg/l, 48 hours
Fish	LC50	Brook trout (Salvelinus fontinalis)	0.007 - 0.017 mg/l, 96 hours
n-Hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 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)	
4,4'-DDD	6.02
4,4'-DDE	6.51
4,4'-DDT	6.91
a-Endosulfan	3.83
Aldrin (TM)	6.5
b-Endosulfan	3.83
BHC (alpha isomer)	3.8
BHC (beta isomer)	3.78
Dieldrin	5.4
Endrin	5.2
Heptachlor	6.1
Heptachlor epoxide (Isomer B)	5.4
Lindane (BHC gamma isomer)	3.72
Methoxychlor	5.08
n-Hexane	3.9

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

a-Endosulfan (CAS 959-98-8)	P050
Aldrin (TM) (CAS 309-00-2)	P004
b-Endosulfan (CAS 33213-65-9)	P050
Dieldrin (CAS 60-57-1)	P037
Endrin (CAS 72-20-8)	P051
Heptachlor (CAS 76-44-8)	P059
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	P059

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	UN1208
UN proper shipping name	Hexanes, solution (n-Hexane RQ = 5001 LBS), MARINE POLLUTANT
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	UN1208
UN proper shipping name	Hexanes solution (n-Hexane)
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	UN1208
UN proper shipping name	HEXANES SOLUTION (n-Hexane), 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)

4,4'-DDT (CAS 50-29-3)	0.1 % One-Time Export Notification only.
Endrin (CAS 72-20-8)	1.0 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

4,4'-DDD (CAS 72-54-8)	Listed.
4,4'-DDE (CAS 72-55-9)	Listed.
4,4'-DDT (CAS 50-29-3)	Listed.
a-Endosulfan (CAS 959-98-8)	Listed.
Aldrin (TM) (CAS 309-00-2)	Listed.
b-Endosulfan (CAS 33213-65-9)	Listed.
BHC (alpha isomer) (CAS 319-84-6)	Listed.
BHC (beta isomer) (CAS 319-85-7)	Listed.
Dieldrin (CAS 60-57-1)	Listed.
Endrin (CAS 72-20-8)	Listed.
Heptachlor (CAS 76-44-8)	Listed.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Listed.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Listed.
Methoxychlor (CAS 72-43-5)	Listed.
n-Hexane (CAS 110-54-3)	Listed.

SARA 304 Emergency release notification

a-Endosulfan (CAS 959-98-8)	1 LBS
Aldrin (TM) (CAS 309-00-2)	1 LBS
b-Endosulfan (CAS 33213-65-9)	1 LBS
Endrin (CAS 72-20-8)	1 LBS

Lindane (BHC gamma isomer) (CAS 58-89-9) 1 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
a-Endosulfan	959-98-8	1		10 lbs	10000 lbs
Aldrin (TM)	309-00-2	1		500 lbs	10000 lbs
b-Endosulfan	33213-65-9	1		10 lbs	10000 lbs
Endrin	72-20-8	1		500 lbs	10000 lbs
Lindane (BHC gamma isomer)	58-89-9	1		1000 lbs	10000 lbs

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
n-Hexane	110-54-3	99.98

Other federal regulations

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

4,4'-DDD (CAS 72-54-8)
4,4'-DDE (CAS 72-55-9)
4,4'-DDT (CAS 50-29-3)
Heptachlor (CAS 76-44-8)
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)
Lindane (BHC gamma isomer) (CAS 58-89-9)
Methoxychlor (CAS 72-43-5)
n-Hexane (CAS 110-54-3)

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US - New Jersey RTK - Substances: Listed substance

4,4'-DDD (CAS 72-54-8)
4,4'-DDE (CAS 72-55-9)
4,4'-DDT (CAS 50-29-3)
a-Endosulfan (CAS 959-98-8)
Aldrin (TM) (CAS 309-00-2)
b-Endosulfan (CAS 33213-65-9)
BHC (alpha isomer) (CAS 319-84-6)
BHC (beta isomer) (CAS 319-85-7)
Dieldrin (CAS 60-57-1)
Endrin (CAS 72-20-8)
Heptachlor (CAS 76-44-8)
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)
Lindane (BHC gamma isomer) (CAS 58-89-9)
Methoxychlor (CAS 72-43-5)
n-Hexane (CAS 110-54-3)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

4,4'-DDT (CAS 50-29-3)
BHC (alpha isomer) (CAS 319-84-6)
BHC (beta isomer) (CAS 319-85-7)
Lindane (BHC gamma isomer) (CAS 58-89-9)

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))

4,4'-DDD (CAS 72-54-8)
4,4'-DDE (CAS 72-55-9)
4,4'-DDT (CAS 50-29-3)
Methoxychlor (CAS 72-43-5)
n-Hexane (CAS 110-54-3)

US. Massachusetts RTK - Substance List

4,4'-DDD (CAS 72-54-8)
4,4'-DDE (CAS 72-55-9)
4,4'-DDT (CAS 50-29-3)
a-Endosulfan (CAS 959-98-8)
Aldrin (TM) (CAS 309-00-2)
b-Endosulfan (CAS 33213-65-9)
BHC (alpha isomer) (CAS 319-84-6)
BHC (beta isomer) (CAS 319-85-7)
Dieldrin (CAS 60-57-1)
Endrin (CAS 72-20-8)
Heptachlor (CAS 76-44-8)
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)
Lindane (BHC gamma isomer) (CAS 58-89-9)
Methoxychlor (CAS 72-43-5)
n-Hexane (CAS 110-54-3)

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

4,4'-DDT (CAS 50-29-3)
a-Endosulfan (CAS 959-98-8)
Aldrin (TM) (CAS 309-00-2)
b-Endosulfan (CAS 33213-65-9)
BHC (alpha isomer) (CAS 319-84-6)
Dieldrin (CAS 60-57-1)
Endrin (CAS 72-20-8)
Heptachlor (CAS 76-44-8)
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)
Lindane (BHC gamma isomer) (CAS 58-89-9)
Methoxychlor (CAS 72-43-5)
n-Hexane (CAS 110-54-3)

US. Pennsylvania RTK - Hazardous Substances

4,4'-DDD (CAS 72-54-8)
4,4'-DDE (CAS 72-55-9)
4,4'-DDT (CAS 50-29-3)
a-Endosulfan (CAS 959-98-8)
Aldrin (TM) (CAS 309-00-2)
b-Endosulfan (CAS 33213-65-9)
BHC (alpha isomer) (CAS 319-84-6)
BHC (beta isomer) (CAS 319-85-7)
Dieldrin (CAS 60-57-1)
Endrin (CAS 72-20-8)
Heptachlor (CAS 76-44-8)
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)
Lindane (BHC gamma isomer) (CAS 58-89-9)
Methoxychlor (CAS 72-43-5)
n-Hexane (CAS 110-54-3)

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

4,4'-DDD (CAS 72-54-8)
4,4'-DDE (CAS 72-55-9)
4,4'-DDT (CAS 50-29-3)
a-Endosulfan (CAS 959-98-8)
Aldrin (TM) (CAS 309-00-2)
b-Endosulfan (CAS 33213-65-9)
BHC (alpha isomer) (CAS 319-84-6)
BHC (beta isomer) (CAS 319-85-7)
Dieldrin (CAS 60-57-1)

Endrin (CAS 72-20-8)
Heptachlor (CAS 76-44-8)
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)
Lindane (BHC gamma isomer) (CAS 58-89-9)
Methoxychlor (CAS 72-43-5)
n-Hexane (CAS 110-54-3)

US. Rhode Island RTK

4,4'-DDT (CAS 50-29-3)
a-Endosulfan (CAS 959-98-8)
Aldrin (TM) (CAS 309-00-2)
b-Endosulfan (CAS 33213-65-9)
BHC (alpha isomer) (CAS 319-84-6)
BHC (beta isomer) (CAS 319-85-7)
Dieldrin (CAS 60-57-1)
Endrin (CAS 72-20-8)
Heptachlor (CAS 76-44-8)
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)
Lindane (BHC gamma isomer) (CAS 58-89-9)
Methoxychlor (CAS 72-43-5)
n-Hexane (CAS 110-54-3)

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

4,4'-DDD (CAS 72-54-8)	Listed: January 1, 1989
4,4'-DDE (CAS 72-55-9)	Listed: January 1, 1989
4,4'-DDT (CAS 50-29-3)	Listed: October 1, 1987
Aldrin (TM) (CAS 309-00-2)	Listed: July 1, 1988
BHC (alpha isomer) (CAS 319-84-6)	Listed: October 1, 1989
BHC (beta isomer) (CAS 319-85-7)	Listed: October 1, 1989
Dieldrin (CAS 60-57-1)	Listed: July 1, 1988
Heptachlor (CAS 76-44-8)	Listed: July 1, 1988
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Listed: July 1, 1988
Lindane (BHC gamma isomer) (CAS 58-89-9)	Listed: October 1, 1989

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

4,4'-DDE (CAS 72-55-9)	Listed: March 30, 2010
4,4'-DDT (CAS 50-29-3)	Listed: May 15, 1998
Endrin (CAS 72-20-8)	Listed: May 15, 1998
Heptachlor (CAS 76-44-8)	Listed: August 20, 1999
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Listed: August 20, 1999
o,p'-DDT (CAS 789-02-6)	Listed: May 15, 1998

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

4,4'-DDT (CAS 50-29-3)	Listed: May 15, 1998
o,p'-DDT (CAS 789-02-6)	Listed: May 15, 1998

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

4,4'-DDE (CAS 72-55-9)	Listed: March 30, 2010
4,4'-DDT (CAS 50-29-3)	Listed: May 15, 1998
o,p'-DDT (CAS 789-02-6)	Listed: May 15, 1998

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

Country(s) or region	Inventory name	On inventory (yes/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 05-04-2017

Revision date 05-05-2017

Version # 02

NFPA ratings Health: 4
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.

Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

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Revision Information Hazard(s) identification: Hazard statement
Hazard(s) identification: Prevention
Hazard(s) identification: Response
Hazard(s) identification: Supplemental information
Composition / Information on Ingredients: Ingredients
First-aid measures: Ingestion
Exposure controls/personal protection: Eye/face protection
Toxicological information: Acute toxicity
Toxicological information: Ingestion
Toxicological information: Skin contact
Ecological information: Ecotoxicity
Disposal considerations: Disposal instructions