

SAFETY DATA SHEET

1. Identification

Product identifier	European Regulation Standards Pesticide Mixture 15	
Other means of identification		
Item	M-EUPESTMIX15K10	
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, dermal	Category 4
	Skin corrosion/irritation	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes skin irritation. May cause drowsiness or dizziness. Very toxic to aquatic life. Very 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. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing. Wear protective gloves/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. 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. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.

Storage	Keep cool. Store in a well-ventilated place. Keep container tightly closed. 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	%
Isooctane	2,2,4-Trimethylpentane	540-84-1	99.987
4,4'-DDD		72-54-8	0.001
4,4'-DDE		72-55-9	0.001
BHC (alpha isomer)		319-84-6	0.001
BHC (beta isomer)		319-85-7	0.001
BHC (delta isomer)		319-86-8	0.001
Dieldrin		60-57-1	0.001
Endrin		72-20-8	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
Mirex		2385-85-5	0.001
o,p'-DDD		53-19-0	0.001
o,p'-DDE		3424-82-6	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. Get medical advice/attention if you feel unwell. 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. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain.
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. 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. Avoid breathing 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). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. 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. 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. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling 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 breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. 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. 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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

Components	Type	Value	Form
Dieldrin (CAS 60-57-1)	PEL	0.25 mg/m ³	
Endrin (CAS 72-20-8)	PEL	0.1 mg/m ³	
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	PEL	0.5 mg/m ³	
Isooctane (CAS 540-84-1)	PEL	2350 mg/m ³ 500 ppm	
Lindane (BHC gamma isomer) (CAS 58-89-9)	PEL	0.5 mg/m ³	
Methoxychlor (CAS 72-43-5)	PEL	15 mg/m ³	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Dieldrin (CAS 60-57-1)	TWA	0.1 mg/m ³	Inhalable fraction and vapor.
Endrin (CAS 72-20-8)	TWA	0.1 mg/m ³	
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	TWA	0.05 mg/m ³	
Lindane (BHC gamma isomer) (CAS 58-89-9)	TWA	0.5 mg/m ³	
Methoxychlor (CAS 72-43-5)	TWA	10 mg/m ³	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Dieldrin (CAS 60-57-1)	TWA	0.25 mg/m ³
Endrin (CAS 72-20-8)	TWA	0.1 mg/m ³
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	TWA	0.5 mg/m ³
Isooctane (CAS 540-84-1)	Ceiling	1800 mg/m ³ 385 ppm
	TWA	350 mg/m ³ 75 ppm
Lindane (BHC gamma isomer) (CAS 58-89-9)	TWA	0.5 mg/m ³

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

Exposure guidelines

US - California OELs: Skin designation

Dieldrin (CAS 60-57-1)	Can be absorbed through the skin.
Endrin (CAS 72-20-8)	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 - Minnesota Haz Subs: Skin designation applies

Dieldrin (CAS 60-57-1)	Skin designation applies.
Endrin (CAS 72-20-8)	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

Dieldrin (CAS 60-57-1)	Can be absorbed through the skin.
Endrin (CAS 72-20-8)	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

Dieldrin (CAS 60-57-1)	Can be absorbed through the skin.
Endrin (CAS 72-20-8)	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 NIOSH Pocket Guide to Chemical Hazards: Skin designation

Dieldrin (CAS 60-57-1) Can be absorbed through the skin.
Endrin (CAS 72-20-8) 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)

Dieldrin (CAS 60-57-1) Can be absorbed through the skin.
Endrin (CAS 72-20-8) 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 fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

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

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. Chemical respirator with organic vapor cartridge.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point -161.41 °F (-107.45 °C) estimated

Initial boiling point and boiling range 210.63 °F (99.24 °C) estimated

Flash point 40.1 °F (4.5 °C) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.1 % estimated

Flammability limit - upper (%) 6 % estimated

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 65.73 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	784 °F (417.78 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.69869 g/cm3 estimated
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Oxidizing properties	Not oxidizing.
Specific gravity	0.7 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 drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Harmful in contact with skin. Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Skin irritation. May cause redness and pain.
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Information on toxicological effects

Acute toxicity	In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. May be fatal if swallowed and enters airways. Harmful in contact with skin.
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Components	Species	Test Results
4,4'-DDD (CAS 72-54-8)		
Acute		
Dermal		
LD50	Rabbit	1200 mg/kg
Oral		
LD50	Rat	113 mg/kg
4,4'-DDE (CAS 72-55-9)		
Acute		
Oral		
LD50	Rat	880 mg/kg

Components	Species	Test Results
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
BHC (delta isomer) (CAS 319-86-8)		
Acute		
Dermal		
LD50	Rat	0.9 mg/kg
Dieldrin (CAS 60-57-1)		
Acute		
Dermal		
LD50	Rat	56 mg/kg
Endrin (CAS 72-20-8)		
Acute		
Dermal		
LD50	Rat	12 mg/kg
Oral		
LD50	Rat	3 mg/kg
Isooctane (CAS 540-84-1)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Lindane (BHC gamma isomer) (CAS 58-89-9)		
Acute		
Dermal		
LD50	Rabbit	50 mg/kg
Inhalation		
LC50	Rat	1.56 mg/l
Oral		
LD50	Rat	76 mg/kg
Mirex (CAS 2385-85-5)		
Acute		
Dermal		
LD50	Rabbit	800 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	Direct contact with eyes may cause temporary 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	Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

BHC (alpha isomer) (CAS 319-84-6)	2B Possibly carcinogenic to humans.
BHC (beta isomer) (CAS 319-85-7)	2B Possibly carcinogenic to humans.
BHC (delta isomer) (CAS 319-86-8)	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 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.
Mirex (CAS 2385-85-5)	2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

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.
BHC (delta isomer) (CAS 319-86-8)	Reasonably Anticipated to be a Human Carcinogen.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Reasonably Anticipated to be a Human Carcinogen.
Mirex (CAS 2385-85-5)	Reasonably Anticipated to be a Human Carcinogen.

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

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

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
4,4'-DDD (CAS 72-54-8)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>)	0.0023 - 0.0044 mg/l, 48 hours
Fish	LC50	Walleye (<i>Stizostedion vitreum vitreum</i>)	0.011 - 0.019 mg/l, 96 hours
4,4'-DDE (CAS 72-55-9)			
Aquatic			
Crustacea	EC50	Brown shrimp (<i>Penaeus aztecus</i>)	0.028 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>)	0.026 - 0.04 mg/l, 96 hours
BHC (alpha isomer) (CAS 319-84-6)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	0.6 - 1 mg/l, 48 hours
Fish	LC50	Zebra danio (<i>Danio rerio</i>)	0.82 - 1.51 mg/l, 96 hours
BHC (beta isomer) (CAS 319-85-7)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>)	0.68 mg/l, 48 hours
Fish	LC50	Guppy (<i>Poecilia reticulata</i>)	1 - 3.55 mg/l, 96 hours
BHC (delta isomer) (CAS 319-86-8)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>)	0.68 mg/l, 48 hours
Fish	LC50	Zebra danio (<i>Danio rerio</i>)	1.15 - 2.17 mg/l, 96 hours
Dieldrin (CAS 60-57-1)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	0.074 - 0.0854 mg/l, 48 hours

Components		Species	Test Results
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.001 - 0.0013 mg/l, 96 hours
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 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
Mirex (CAS 2385-85-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	> 0.1 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 20 mg/l, 96 hours

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

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

4,4'-DDD	6.02
4,4'-DDE	6.51
BHC (alpha isomer)	3.8
BHC (beta isomer)	3.78
BHC (delta isomer)	4.14
Dieldrin	5.4
Endrin	5.2
Heptachlor epoxide (Isomer B)	5.4
Isooctane	5.18
Lindane (BHC gamma isomer)	3.72
Methoxychlor	5.08
Mirex	5.28

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

Dieldrin (CAS 60-57-1) P037

Endrin (CAS 72-20-8)

P051

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	UN1262
UN proper shipping name	Octanes, solution (Isooctane RQ = 1000 LBS), MARINE POLLUTANT (Mirex)
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	UN1262
UN proper shipping name	Octanes solution (Isooctane)
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 with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1262
UN proper shipping name	OCTANES SOLUTION (Isooctane), MARINE POLLUTANT
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	Yes
EmS	F-E, S-E
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.

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

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.
BHC (alpha isomer) (CAS 319-84-6)	Listed.
BHC (beta isomer) (CAS 319-85-7)	Listed.
BHC (delta isomer) (CAS 319-86-8)	Listed.
Dieldrin (CAS 60-57-1)	Listed.
Endrin (CAS 72-20-8)	Listed.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Listed.
Isooctane (CAS 540-84-1)	Listed.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Listed.
Methoxychlor (CAS 72-43-5)	Listed.

SARA 304 Emergency release notification

Endrin (CAS 72-20-8)	1 LBS
Lindane (BHC gamma isomer) (CAS 58-89-9)	1 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

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

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Endrin	72-20-8	1		500	10000
Lindane (BHC gamma isomer)	58-89-9	1		1000	10000

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**

4,4'-DDD (CAS 72-54-8)
 4,4'-DDE (CAS 72-55-9)
 Heptachlor epoxide (Isomer B) (CAS 1024-57-3)
 Isooctane (CAS 540-84-1)
 Lindane (BHC gamma isomer) (CAS 58-89-9)
 Methoxychlor (CAS 72-43-5)

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

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
BHC (alpha isomer) (CAS 319-84-6)	Listed: October 1, 1989
BHC (beta isomer) (CAS 319-85-7)	Listed: October 1, 1989
BHC (delta isomer) (CAS 319-86-8)	Listed: October 1, 1987
Dieldrin (CAS 60-57-1)	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
Mirex (CAS 2385-85-5)	Listed: January 1, 1988

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

4,4'-DDE (CAS 72-55-9)	Listed: March 30, 2010
Endrin (CAS 72-20-8)	Listed: May 15, 1998
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Listed: August 20, 1999

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

4,4'-DDE (CAS 72-55-9)	Listed: March 30, 2010
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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)
 Isooctane (CAS 540-84-1)
 Methoxychlor (CAS 72-43-5)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/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 03-31-2021

Version # 01

NFPA ratings Health: 2
Flammability: 3
Instability: 0

Disclaimer

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