SAFETY DATA SHEET



1. Identification

Product identifier ISO 6468 Pesticide Mixture

Other means of identification

M-ISO6468PST1J10 Item For Laboratory Use Only Recommended use

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Chem Service, Inc. Company name 660 Tower Lane **Address**

West Chester, PA 19380

United States

Toll Free 800-452-9994 **Telephone**

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

Category 2 Physical hazards Flammable liquids **Health hazards** Acute toxicity, oral Category 1 Skin corrosion/irritation Category 2

Serious eve damage/eve 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 Category 1

Aspiration hazard

Environmental hazards Hazardous to the aquatic environment, acute

Category 2

Hazardous to the aquatic environment,

Category 2

long-term hazard

OSHA defined hazards Not classified.

Label elements



Signal word

Hazard statement Highly flammable liquid and vapor. Fatal if swallowed. May be fatal if swallowed and enters

airways. 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. Toxic to aquatic life with long lasting effects.

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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 protective gloves/protective clothing/eye protection/face protection.

Response

If swallowed: Immediately call a poison center/doctor. Rinse mouth. 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. 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. 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

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	%
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
BHC (delta isomer)		319-86-8	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'-DDD		53-19-0	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

Ingestion

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 contactTake 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.

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. 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

Indication of immediate medical attention and special treatment needed

General information

Aspiration may cause pulmonary edema and pneumonitis. 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.

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.

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
General fire hazards

Use standard firefighting procedures and consider the hazards of other involved materials.

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). 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.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. 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

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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. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. 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).

Value

Form

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

Components	туре	Value	1 01111
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	Туре	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	,
Heptachlor (CAS 76-44-8)	TWA	0.05 mg/m3	
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	TWA	0.05 mg/m3	

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SDS US

Components	Туре	Value F	orm
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 Chem	ical Hazards		
Components	Туре	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	
ogical limit values			
ACGIH Biological Exposure Indice	s		
Components Value	Determinant	Specimen Sampling Time	

Biol

Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedio n, 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. Skin designation applies. Aldrin (TM) (CAS 309-00-2) b-Endosulfan (CAS 33213-65-9) Skin designation applies. Skin designation applies. Dieldrin (CAS 60-57-1) Endrin (CAS 72-20-8) Skin designation applies. Skin designation applies. Heptachlor (CAS 76-44-8) 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. Can be absorbed through the skin. Dieldrin (CAS 60-57-1) 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. Can be absorbed through the skin. Heptachlor (CAS 76-44-8) 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)

Aldrin (TM) (CAS 309-00-2)

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)

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.

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

Observe any medical surveillance requirements. 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 155.66 °F (68.7 °C) estimated

range

Flash point -7.0 °F (-21.7 °C) estimated

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Evaporation rate Not available.
Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Flammability limit - upper

(%)

Not available.

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 Not available.

(n-octanol/water)

Auto-ignition temperature 437 °F (225 °C) estimated

Decomposition temperature Not available. **Viscosity** Not available.

Other information

Density 1.63804 g/cm3 estimated

Explosive properties Not explosive.

Flammability class Flammable IB estimated

Oxidizing properties Not oxidizing.

Specific gravity 1.64 estimated

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stabilityMaterial is stable under normal conditions.Possibility of hazardousHazardous polymerization does not occur.

reactions

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. 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. 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.

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Components	Species	Test Results
4,4'-DDD (CAS 72-54-8)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	1200 mg/kg
Oral		
LD50	Mouse	1466 mg/kg
	Rat	113 mg/kg
4,4'-DDE (CAS 72-55-9)		
<u>Acute</u>		
Oral	Mayor	700 mm//cm
LD50	Mouse	700 mg/kg
	Rat	880 mg/kg
4,4'-DDT (CAS 50-29-3)		
<u>Acute</u>		
Dermal LD50	Guinea pig	1000 mg/kg
2500	Mouse	250 mg/kg
	Rabbit	300 mg/kg
	Rat	1931 mg/kg
01	Rai	1931 Hig/kg
Oral LD50	Dog	500 mg/kg
LDOU	Goat	> 1000 mg/kg
	Guinea pig Mouse	250 mg/kg
		150 mg/kg
	Rabbit	300 mg/kg
	Rat	87 mg/kg
E	Sheep	> 1000 mg/kg
a-Endosulfan (CAS 959-98-8)		
<u>Acute</u>		
Dermal LD50	Rabbit	90 mg/kg
2200	Rat	34 mg/kg
Inhalation	rac .	o i mgrkg
LC50	Rat	0.08 mg/l, 4 Hours
Oral		3,
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)	r.ac	10 mg/kg
Acute		
<u>Acute</u> Dermal		
LD50	Rabbit	150 mg/kg
	Rat	98 mg/kg
Oral		5 5
LD50	Mouse	44 mg/kg

Components	Species	Test Results
	Rat	39 mg/kg
b-Endosulfan (CAS 33213-65-9)		
<u>Acute</u>		
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)	
<u>Acute</u>	,	
Dermal		
LD50	Rat	0.9 mg/kg
Oral		
LD50	Rat	177 mg/kg
BHC (beta isomer) (CAS 319-85-7)		
<u>Acute</u>		
Dermal		
LD50	Rat	0.9 mg/kg
Oral		
LD50	Mouse	1500 mg/kg
	Rat	6 g/kg
BHC (delta isomer) (CAS 319-86-8		
<u>Acute</u>		
Dermal	5.4	0.0
LD50	Rat	0.9 mg/kg
Oral	Dat	4000
LD50	Rat	1000 mg/kg
Dieldrin (CAS 60-57-1)		
<u>Acute</u> Dermal		
LD50	Rat	56 mg/kg
Oral	Nat	50 mg/kg
LD50	Dog	65 mg/kg
LD30		100 - 200 mg/kg
	Domestic goat	
	Monkey	3 mg/kg
	Mouse	38 mg/kg
	Rat	24 mg/kg
	Sheep	50 - 75 mg/kg
Endrin (CAS 72-20-8)		
<u>Acute</u>		
Dermal LD50	Rabbit	60 ma/ka
LDUU	Nauvii	60 mg/kg

Components	Species	Test Results
	Rat	12 mg/kg
Oral		
LD50	Guinea pig	16 mg/kg
	Monkey	3 mg/kg
	Mouse	1.3 mg/kg
	Rabbit	7 - 10 mg/kg
	Rat	3 mg/kg
eptachlor (CAS 76-44-8)		
<u>Acute</u>		
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
leptachlor epoxide (Isomer Acute	B) (CAS 1024-57-3)	
Dermal LD50	Guinea pig	116 mg/kg
LDOU	Rabbit	500 - 2000 mg/kg
1.1.1.0.	Rat	119 mg/kg
Inhalation LC50	Rat	200 mg/l, 4 Hours
	Nat	200 mg/l, 4 mours
Oral LD50	Cat	67 mg/kg
LD30	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
ndane (BHC gamma isome	er) (CAS 58-89-9)	
<u>Acute</u>		
Dermal	D-M-W	50 4
LD50	Rabbit	50 mg/kg
	Rat	500 mg/kg
Inhalation	B 4	4.55
LC50	Rat	1.56 mg/l
Oral	_	
LD50	Dog	40 mg/kg

Components	Species	Test Results
	Guinea pig	127 mg/kg
	Hamster	360 mg/kg
	Mouse	44 mg/kg
	Rabbit	50 mg/kg
	Rat	76 mg/kg
Methoxychlor (CAS 72-43-5)		
<u>Acute</u>		
Oral		
LD50	Mouse	2900 mg/kg
	Rat	3460 mg/kg
n-Hexane (CAS 110-54-3)		
<u>Acute</u>		
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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye

Causes serious eye irritation.

irritation

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

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

No data available to indicate product or any components present at greater than 0.1% are Germ cell mutagenicity

mutagenic or genotoxic.

Not classifiable as to carcinogenicity to humans. Carcinogenicity

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. 2B Possibly carcinogenic to humans. BHC (delta isomer) (CAS 319-86-8)

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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

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.

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

Reasonably Anticipated to be a Human Carcinogen. Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Suspected of damaging fertility.

Specific target organ toxicity single exposure

May cause drowsiness and dizziness.

Specific target organ toxicity -

Causes damage to organs through prolonged or repeated exposure.

repeated exposure

Aspiration hazard

May be fatal if swallowed and enters airways.

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

harmful.

12. Ecological information

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

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 959-9	8-8)		
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	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	3-65-9)		
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 3	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
BHC (delta isomer) (CAS	319-86-8)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	0.68 mg/l, 48 hours

Components		Species	Test Results
Fish	LC50	Zebra danio (Danio rerio)	1.15 - 2.17 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
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 76-4-	4-8)		
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 (Is	somer B) (CAS 102	4-57-3)	
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 58-8	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	2-43-5)		
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 110-5	4-3)		
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promele	as) 2.101 - 2.981 mg/l, 96 hours

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

Persistence and degradability

Bioaccumulative potential

4,4'-DDD6.024,4'-DDE6.514,4'-DDT6.91
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
BHC (delta isomer) 4.14
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

UN1208 **UN number**

UN proper shipping name Transport hazard class(es) Hexanes, solution (n-Hexane RQ = 5001 LBS), MARINE POLLUTANT

Class 3 Subsidiary risk 3 Label(s) Packing group Ш

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 150 202 Packaging non bulk Packaging bulk 242

IATA

UN number UN1208

UN proper shipping name Hexanes solution (n-Hexane)

Transport hazard class(es)

Class 3 Subsidiary risk П Packing group **Environmental hazards** Yes 3H **ERG Code**

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 UN1208

UN proper shipping name HEXANES SOLUTION (n-Hexane), MARINE POLLUTANT

Transport hazard class(es)

3 Class

Subsidiary risk Packing group ||
Environmental hazards

Marine pollutant Yes
EmS F-E, S-D

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Not established.

Transport in bulk according to Annex II of MARPOL 73/78 and

Annex II of MARPOL 73/78 and the IBC Code

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)

4,4'-DDT (CAS 50-29-3)

Endrin (CAS 72-20-8)

0.1 % One-Time Export Notification only.
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.
BHC (delta isomer) (CAS 319-86-8)	Listed.

Dieldrin (CAS 60-57-1)

Endrin (CAS 72-20-8)

Heptachlor (CAS 76-44-8)

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

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

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

SARA 311/312 Hazardous No

chemical

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

Not regulated.

(SDWA)

US state regulationsWARNING: 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
BHC (delta isomer) (CAS 319-86-8)	Listed: October 1, 1987

Dieldrin (CAS 60-57-1)

Heptachlor (CAS 76-44-8)

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

Listed: July 1, 1988

Listed: July 1, 1988

Listed: July 1, 1988

Listed: October 1, 1989

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

4,4'-DDE (CAS 72-55-9)Listed: March 30, 20104,4'-DDT (CAS 50-29-3)Listed: May 15, 1998Endrin (CAS 72-20-8)Listed: May 15, 1998Heptachlor (CAS 76-44-8)Listed: August 20, 1999Heptachlor epoxide (Isomer B) (CAS 1024-57-3)Listed: August 20, 1999o,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

Inventory name

4,4'-DDE (CAS 72-55-9)Listed: March 30, 20104,4'-DDT (CAS 50-29-3)Listed: May 15, 1998o,p'-DDT (CAS 789-02-6)Listed: May 15, 1998

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)

International Inventories

Country(s) or region

		· · · · · · · · · · · · · · · · · · ·
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

 Issue date
 09-01-2017

 Revision date
 09-05-2017

 Version #
 02

 NFPA ratings
 Health: 4

Flammability: 3 Instability: 0

Material name: ISO 6468 Pesticide Mixture

On inventory (yes/no)*

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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