## SAFETY DATA SHEET



### 1. Identification

Product identifier USP Lanolin Pesticide Standard Mixture-1

Other means of identification

Item M-USPLAN1J10

Recommended use For Laboratory Use Only

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company nameChem Service, Inc.Address660 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 hazardsFlammable liquidsCategory 2Health hazardsSkin corrosion/irritationCategory 2Serious eye damage/eye irritationCategory 2A

Reproductive toxicity Category 2
Specific target organ toxicity, single exposure Category 3 narcotic effects

Specific target organ toxicity, repeated

exposure

Category 1

Category 2

Aspiration hazard Category 1
Hazardous to the aquatic environment, acute Category 2

Environmental hazards Hazardous to the aquatic environment, acute

hazard

Hazardous to the aquatic environment,

long-term hazard

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. Causes skin

irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated

exposure. 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 protective gloves/protective clothing/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. 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 **Disposal**  Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Hazard(s) not otherwise

Dispose of contents/container in accordance with local/regional/national/international regulations.

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	99.97
2,3,4,5-Tetrachloronitrobenzene		879-39-0	0.001
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
Bromophos ethyl		4824-78-6	0.001
Carbophenothion		786-19-6	0.001
Carbophenothion sulfone		16662-85-4	0.001
Carbophenothion sulfoxide		17297-40-4	0.001
Chlorfenvinphos		470-90-6	0.001
Chlorpyrifos		2921-88-2	0.001
Diazinon		333-41-5	0.001
Dichlofenthion		97-17-6	0.001
Dieldrin		60-57-1	0.001
Endrin		72-20-8	0.001
Ethion		563-12-2	0.001
Fenchlorphos		299-84-3	0.001
Heptachlor		76-44-8	0.001
Heptachlor epoxide (Isomer B)		1024-57-3	0.001
Hexachlorobenzene		118-74-1	0.001
Lindane (BHC gamma isomer)		58-89-9	0.001
Malathion		121-75-5	0.001
Methoxychlor		72-43-5	0.001
o,p'-DDD		53-19-0	0.001
o,p'-DDE		3424-82-6	0.001

Chemical name	Common name and synonyms	CAS number	%
o,p'-DDT		789-02-6	0.001
Pirimiphos-ethyl		23505-41-1	0.001
Propetamphos		31218-83-4	0.001
Tetrachlorvinphos		22248-79-9	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. 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. 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 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

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 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. 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

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	Туре	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
Fenchlorphos (CAS 299-84-3)	PEL	15 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

Lindsne (BHC gamma isomen) (CAS 88-94)   PEL	US. OSHA Table Z-1 Limits for Air Co Components	ontaminants (29 CFR 1910.10 Type	000) Value	Form
Malathion (CAS 121-75-5)   PEL   15 mg/m3   Total dust.		PEL	0.5 mg/m3	
Methoxychlor (CAS         PEL         15 mg/m3         Total dust.           7-2-43-5)         n-Hexane (CAS 110-54-3)         PEL         1800 mg/m3         Total dust.           US. ACGIH Threshold Limit Values         Type         Value         Form           4-7-DDT (CAS 50-29-3)         TWA         1 mg/m3         Inhalable fraction and vapor.           4-7-DDT (CAS 50-29-3)         TWA         0.1 mg/m3         Inhalable fraction and vapor.           Aldrin (TM) (CAS 309-00-2)         TWA         0.1 mg/m3         Inhalable fraction and vapor.           b-Endosulfan (CAS         TWA         0.1 mg/m3         Inhalable fraction and vapor.           b-Endosulfan (CAS 333-41-5)         TWA         0.1 mg/m3         Inhalable fraction and vapor.           Chloryprifics (CAS 563-12-2)         TWA         0.1 mg/m3         Inhalable fraction and vapor.           Diazinon (CAS 333-41-5)         TWA         0.1 mg/m3         Inhalable fraction and vapor.           Endrin (CAS 60-57-1)         TWA         0.1 mg/m3         Inhalable fraction and vapor.           Endrin (CAS 76-44-8)         TWA         0.1 mg/m3         Inhalable fraction and vapor.           Fenchlorybox (CAS 563-88-9)         TWA         0.5 mg/m3         Inhalable fraction and vapor.           Helptachber (CAS 76-44-8)         T		PEL	15 mg/m3	Total dust.
Name	Methoxychlor (CAS			Total dust.
Us. ACGIH Threshold Limit Values   Type   Value   Form		PEL	•	
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Fenchlorphos (CAS   TWA   5 mg/m3   Inhalable fraction and 299-84-3)   TWA   0.05 mg/m3   Inhalable fraction and 299-84-3)   Fenchlorphos (CAS 76-44-8)   TWA   0.05 mg/m3   Inhalable fraction and 299-84-3)   Fenchlorphos (CAS 76-44-8)   TWA   0.05 mg/m3   Inhalable fraction and 299-84-3)   Fexachlorobenzene (CAS   TWA   0.002 mg/m3   Inhalable fraction and 290-89-90   Inhalable fraction and 290-80-90   Inhalable fraction and 200-80-90   Inhalable fraction and 200-80-90   Inhalable fraction and 200-8	,		•	
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Heptachlor epoxide (Isomer B) (CAS 1024-57-3)		TWA	0.05 mg/m3	vapor.
Hexachlorobenzene (CAS   TWA   118-74-1)	Heptachlor epoxide (Isomer		•	
Lindane (BHC gamma isomer) (CAS 58-89-9)  Malathion (CAS 121-75-5)  Methoxychlor (CAS  Methoxychlor (CAS  TWA  TVA  TVA  TVA  TVA  TVA  TVA  TVA	Hexachlorobenzene (CAS	TWA	0.002 mg/m3	
Malathion (CAS 121-75-5)         TWA         1 mg/m3 vapor.           Methoxychlor (CAS         TWA         10 mg/m3           72-43-5)         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         TWA         0.1 mg/m3           959-98-8)         Aldrin (TM) (CAS 309-00-2)         TWA         0.25 mg/m3           b-Endosulfan (CAS         TWA         0.1 mg/m3           33213-65-9)         Chlorpyrifos (CAS         STEL         0.6 mg/m3           2921-88-2)         TWA         0.2 mg/m3           Diazinon (CAS 333-41-5)         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           Ethion (CAS 563-12-2)         TWA         0.4 mg/m3           Fenchlorphos (CAS         TWA         0.5 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         TWA	Lindane (BHC gamma	TWA	0.5 mg/m3	
Methoxychlor (CAS         TWA         10 mg/m3           72-43-5)         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         TWA         0.1 mg/m3           959-98-8)         Aldrin (TM) (CAS 309-00-2)         TWA         0.25 mg/m3           b-Endosulfan (CAS         TWA         0.1 mg/m3           32213-65-9)         Chlorpyrifos (CAS         STEL         0.6 mg/m3           2921-88-2)         TWA         0.2 mg/m3           Diazinon (CAS 333-41-5)         TWA         0.1 mg/m3           Dieldrin (CAS 60-57-1)         TWA         0.1 mg/m3           Endrin (CAS 72-20-8)         TWA         0.1 mg/m3           Ethion (CAS 563-12-2)         TWA         0.4 mg/m3           Fenchlorphos (CAS         TWA         0.5 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         TWA         0.5 mg/m3		TWA	1 mg/m3	
N-Hexane (CAS 110-54-3)   TWA   50 ppm		TWA	10 mg/m3	
Components         Type         Value           4,4'-DDT (CAS 50-29-3)         TWA         0.5 mg/m3           a-Endosulfan (CAS         TWA         0.1 mg/m3           959-98-8)         Aldrin (TM) (CAS 309-00-2)         TWA         0.25 mg/m3           b-Endosulfan (CAS         TWA         0.1 mg/m3           33213-65-9)         STEL         0.6 mg/m3           Chlorpyrifos (CAS         STEL         0.6 mg/m3           2921-88-2)         TWA         0.2 mg/m3           Diazinon (CAS 333-41-5)         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           Ethion (CAS 563-12-2)         TWA         0.4 mg/m3           Fenchlorphos (CAS         TWA         10 mg/m3           299-84-3)         TWA         0.5 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)         TWA         0.5 mg/m3	n-Hexane (CAS 110-54-3)		50 ppm	
a-Endosulfan (CAS 959-98-8) Aldrin (TM) (CAS 309-00-2) TWA 0.25 mg/m3 b-Endosulfan (CAS TWA 0.1 mg/m3 33213-65-9) Chlorpyrifos (CAS STEL 0.6 mg/m3 2921-88-2) TWA 0.2 mg/m3 Diazinon (CAS 333-41-5) 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 Ethion (CAS 563-12-2) TWA 0.4 mg/m3 Ethion (CAS 60-12-2) TWA 0.4 mg/m3 Fenchlorphos (CAS TWA 0.5 mg/m3 Heptachlor (CAS 76-44-8) TWA 0.5 mg/m3 Heptachlor epoxide (Isomer B) (CAS 1024-57-3) Lindane (BHC gamma TWA 0.5 mg/m3			Value	
a-Endosulfan (CAS 959-98-8) Aldrin (TM) (CAS 309-00-2) TWA 0.25 mg/m3 b-Endosulfan (CAS TWA 0.1 mg/m3 33213-65-9) Chlorpyrifos (CAS STEL 0.6 mg/m3 2921-88-2) TWA 0.2 mg/m3 Diazinon (CAS 333-41-5) 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 Ethion (CAS 563-12-2) TWA 0.4 mg/m3 Ethion (CAS 60-12-2) TWA 0.4 mg/m3 Fenchlorphos (CAS TWA 0.5 mg/m3 Heptachlor (CAS 76-44-8) TWA 0.5 mg/m3 Heptachlor epoxide (Isomer B) (CAS 1024-57-3) Lindane (BHC gamma TWA 0.5 mg/m3	4,4'-DDT (CAS 50-29-3)	TWA	0.5 mg/m3	
Aldrin (TM) (CAS 309-00-2) TWA 0.25 mg/m3 b-Endosulfan (CAS TWA 0.1 mg/m3 33213-65-9) Chlorpyrifos (CAS STEL 0.6 mg/m3 2921-88-2) TWA 0.2 mg/m3 Diazinon (CAS 333-41-5) 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 Ethion (CAS 563-12-2) TWA 0.4 mg/m3 Fenchlorphos (CAS TWA 0.4 mg/m3 Fenchlorphos (CAS TWA 0.5 mg/m3 Heptachlor (CAS 76-44-8) TWA 0.5 mg/m3 Heptachlor epoxide (Isomer TWA 0.5 mg/m3 Lindane (BHC gamma TWA 0.5 mg/m3  Lindane (BHC gamma TWA 0.5 mg/m3	a-Endosulfan (CAS	TWA	0.1 mg/m3	
b-Endosulfan (CAS 33213-65-9) Chlorpyrifos (CAS STEL 0.6 mg/m3 2921-88-2) TWA 0.2 mg/m3 Diazinon (CAS 333-41-5) 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 Ethion (CAS 563-12-2) TWA 0.4 mg/m3 Fenchlorphos (CAS TWA 0.4 mg/m3 Fenchlorphos (CAS TWA 0.5 mg/m3 Heptachlor (CAS 76-44-8) Heptachlor epoxide (Isomer TWA 0.5 mg/m3 B) (CAS 1024-57-3) Lindane (BHC gamma TWA 0.5 mg/m3		TWA	0.25 ma/m3	
Chlorpyrifos (CAS       STEL       0.6 mg/m3         2921-88-2)       TWA       0.2 mg/m3         Diazinon (CAS 333-41-5)       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         Ethion (CAS 563-12-2)       TWA       0.4 mg/m3         Fenchlorphos (CAS       TWA       10 mg/m3         299-84-3)       TWA       0.5 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)       TWA       0.5 mg/m3	b-Endosulfan (CAS		•	
Diazinon (CAS 333-41-5)       TWA       0.2 mg/m3         Dieldrin (CAS 60-57-1)       TWA       0.25 mg/m3         Endrin (CAS 72-20-8)       TWA       0.1 mg/m3         Ethion (CAS 563-12-2)       TWA       0.4 mg/m3         Fenchlorphos (CAS       TWA       10 mg/m3         299-84-3)       TWA       0.5 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)       TWA       0.5 mg/m3	Chlorpyrifos (CAS	STEL	0.6 mg/m3	
Diazinon (CAS 333-41-5)       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         Ethion (CAS 563-12-2)       TWA       0.4 mg/m3         Fenchlorphos (CAS       TWA       10 mg/m3         299-84-3)       TWA       0.5 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)       TWA       0.5 mg/m3	,	TWA	0.2 mg/m3	
Dieldrin (CAS 60-57-1)       TWA       0.25 mg/m3         Endrin (CAS 72-20-8)       TWA       0.1 mg/m3         Ethion (CAS 563-12-2)       TWA       0.4 mg/m3         Fenchlorphos (CAS       TWA       10 mg/m3         299-84-3)       TWA       0.5 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)       TWA       0.5 mg/m3	Diazinon (CAS 333-41-5)		_	
Endrin (CAS 72-20-8)       TWA       0.1 mg/m3         Ethion (CAS 563-12-2)       TWA       0.4 mg/m3         Fenchlorphos (CAS       TWA       10 mg/m3         299-84-3)       TWA       0.5 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)       TWA       0.5 mg/m3			_	
Ethion (CAS 563-12-2)       TWA       0.4 mg/m3         Fenchlorphos (CAS       TWA       10 mg/m3         299-84-3)       TWA       0.5 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)       TWA       0.5 mg/m3	,		•	
Fenchlorphos (CAS TWA 10 mg/m3 299-84-3) Heptachlor (CAS 76-44-8) TWA 0.5 mg/m3 Heptachlor epoxide (Isomer TWA 0.5 mg/m3 0.5 mg/m3 B) (CAS 1024-57-3) Lindane (BHC gamma TWA 0.5 mg/m3	,		•	
Heptachlor (CAS 76-44-8)  Heptachlor epoxide (Isomer B) (CAS 1024-57-3)  Lindane (BHC gamma  TWA  0.5 mg/m3  0.5 mg/m3  0.5 mg/m3	Fenchlorphos (CAS		•	
Heptachlor epoxide (Isomer TWA 0.5 mg/m3 B) (CAS 1024-57-3) Lindane (BHC gamma TWA 0.5 mg/m3		TWA	0.5 ma/m3	
Lindane (BHC gamma TWA 0.5 mg/m3	Heptachlor epoxide (Isomer		•	
	Lindane (BHC gamma	TWA	0.5 mg/m3	

US. NIOSH: Pocket Guide to Che	emical Hazards
Components	Type

Components	Туре	Value	
Malathion (CAS 121-75-5)	TWA	10 mg/m3	
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3	
		50 ppm	

### **Biological limit values**

<b>ACGIH Biological</b>	<b>Exposure</b>	Indices
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Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedio n, without hydrolysis	Urine	*

<sup>\* -</sup> For sampling details, please see the source document.

#### **Exposure guidelines**

### US - California OELs: Skin designation

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) Chlorpyrifos (CAS 2921-88-2) Diazinon (CAS 333-41-5) Dieldrin (CAS 60-57-1) Endrin (CAS 72-20-8) Ethion (CAS 563-12-2) Heptachlor (CAS 76-44-8) Heptachlor epoxide (Isomer B) (CAS 1024-57-3) Hexachlorobenzene (CAS 118-74-1) Lindane (BHC gamma isomer) (CAS 58-89-9) Malathion (CAS 121-75-5) n-Hexane (CAS 110-54-3) US - Minnesota Haz Subs: Skin designation applies

a-Endosulfan (CAS 959-98-8) Aldrin (TM) (CAS 309-00-2) b-Endosulfan (CAS 33213-65-9) Chlorpyrifos (CAS 2921-88-2) Diazinon (CAS 333-41-5) Dieldrin (CAS 60-57-1) Endrin (CAS 72-20-8) Ethion (CAS 563-12-2) Heptachlor (CAS 76-44-8) Heptachlor epoxide (Isomer B) (CAS 1024-57-3) Hexachlorobenzene (CAS 118-74-1) Lindane (BHC gamma isomer) (CAS 58-89-9)

Malathion (CAS 121-75-5)

US - Tennessee OELs: Skin designation

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) Chlorpyrifos (CAS 2921-88-2) Diazinon (CAS 333-41-5) Dieldrin (CAS 60-57-1) Endrin (CAS 72-20-8) Ethion (CAS 563-12-2) Heptachlor (CAS 76-44-8)

Heptachlor epoxide (Isomer B) (CAS 1024-57-3) Lindane (BHC gamma isomer) (CAS 58-89-9)

Malathion (CAS 121-75-5)

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

a-Endosulfan (CAS 959-98-8) Aldrin (TM) (CAS 309-00-2) b-Endosulfan (CAS 33213-65-9) Chlorpyrifos (CAS 2921-88-2)

Can be absorbed through the skin. Can be absorbed through the skin.

Skin designation applies. Skin designation applies.

Can be absorbed through the skin. Can be absorbed through the skin.

Can be absorbed through the skin. Can be absorbed through the skin. Can be absorbed through the skin. Can be absorbed through the skin. Diazinon (CAS 333-41-5) 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. Ethion (CAS 563-12-2) 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. Hexachlorobenzene (CAS 118-74-1) Can be absorbed through the skin. Lindane (BHC gamma isomer) (CAS 58-89-9) Can be absorbed through the skin. Malathion (CAS 121-75-5) 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. Can be absorbed through the skin. Chlorpyrifos (CAS 2921-88-2) Diazinon (CAS 333-41-5) 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. Ethion (CAS 563-12-2) 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. Malathion (CAS 121-75-5) 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. 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. Malathion (CAS 121-75-5) Can be absorbed through the skin.

# Appropriate engineering controls

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

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

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

Skin protection

**Hand protection** Wear appropriate chemical resistant gloves.

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. 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

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

**Evaporation rate** Not available. Not applicable. Flammability (solid, gas) Upper/lower flammability or explosive limits

Flammability limit - lower

1.1 % estimated

(%)

Flammability limit - upper

7.5 % estimated

(%)

Explosive limit - lower (%) Not available. Explosive limit - upper (%) Not available.

201.3 hPa estimated Vapor pressure

Vapor density Not available. Relative density Not available.

Solubility(ies)

Not available. Solubility (water) Partition coefficient Not available.

(n-octanol/water)

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

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

Other information

Density 1.46796 g/cm3 estimated

Not explosive. **Explosive properties** 

Flammability class Flammable IB estimated

Not oxidizing Oxidizing properties Specific gravity 1.47 estimated VOC 0.0005 % estimated

10. Stability and reactivity

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

**Chemical stability** Material is stable under normal conditions. Possibility of hazardous Hazardous polymerization does not occur.

reactions

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the Conditions to avoid

flash point. Contact with incompatible materials.

Strong oxidizing agents. Incompatible materials

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.

Causes serious eye irritation. Eye contact

Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious Ingestion

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** May be fatal if swallowed and enters airways.

Components	Species	Test Results
4,4'-DDD (CAS 72-54-8)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	1200 mg/kg
Oral		
LD50	Rat	113 mg/kg
4,4'-DDE (CAS 72-55-9)		
<u>Acute</u>		
Oral	5.4	000 #
LD50	Rat	880 mg/kg
4,4'-DDT (CAS 50-29-3)		
Acute		
<b>Dermal</b> LD50	Rabbit	300 mg/kg
	Rabbit	300 mg/kg
Oral	Det	07
LD50	Rat	87 mg/kg
a-Endosulfan (CAS 959-98-8)		
Acute		
<b>Dermal</b> LD50	Rat	34 mg/kg
	Nat	54 mg/kg
Inhalation LC50	Rat	0.08 mg/l, 4 Hours
	Nat	0.00 Hig/i, 4 Hours
Aldrin (TM) (CAS 309-00-2)		
<u>Acute</u> Dermal		
LD50	Rat	98 mg/kg
b-Endosulfan (CAS 33213-65-9)	Nat	50 mg/kg
<u>Acute</u> Dermal		
LD50	Rat	34 mg/kg
Inhalation		5 ·55
LC50	Rat	0.08 mg/l, 4 Hours
BHC (alpha isomer) (CAS 319-84-6)		oloo iligii, illioolo
Acute		
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
Bromophos ethyl (CAS 4824-78-6)		
<u>Acute</u>		
Oral		
LD50	Rat	52 mg/kg
Chlorfenvinphos (CAS 470-90-6)		
<u>Acute</u>		
Dermal		
LD50	Rat	31 mg/kg

Components	Species	Test Results
Inhalation		
LC50	Rat	0.05 mg/l, 4 Hours
Chlorpyrifos (CAS 2921-88-2)		
<u>Acute</u>		
Dermal		
LD50	Rat	202 mg/kg
Inhalation		
LC50	Rat	> 0.2 mg/l, 4 Hours
Oral		
LD50	Rat	82 mg/kg
Diazinon (CAS 333-41-5)		
<u>Acute</u>		
Oral		
LD50	Rat	66 mg/kg
Dichlofenthion (CAS 97-17-6)		
<u>Acute</u>		
Oral		
LD50	Rat	270 mg/kg
Dieldrin (CAS 60-57-1)		
Acute		
Dermal		
LD50	Rat	56 mg/kg
Endrin (CAS 72-20-8)		0 0
Acute		
<u>Pouto</u> Dermal		
LD50	Rat	12 mg/kg
Oral		
LD50	Rat	3 mg/kg
Fenchlorphos (CAS 299-84-3)	100	o mg/kg
Acute		
<u>Acute</u> Dermal		
LD50	Rabbit	1000 mg/kg
Oral	Tabbit	1000 mg/kg
LD50	Rat	1250 mg/kg
		1200 Hig/kg
Hexachlorobenzene (CAS 118-74-	1)	
Acute		
<b>Oral</b> LD50	Rat	3500 mg/kg
		3300 Hg/kg
Lindane (BHC gamma isomer) (CA	72 28-88-8)	
Acute Barrer		
<b>Dermal</b> LD50	Dobbit	E0 malka
	Rabbit	50 mg/kg
Inhalation	Det	1.56 mg/l
LC50	Rat	1.56 mg/l
Oral	Det	70
LD50	Rat	76 mg/kg
Malathion (CAS 121-75-5)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	2460 - 6150 mg/kg

Components	Species	Test Results
Inhalation		
LC50	Rat	0.0438 mg/l, 4 Hours
Oral		
LD50	Rat	290 mg/kg
n-Hexane (CAS 110-54-3)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 4 Hours
Pirimiphos-ethyl (CAS 23505-41-1)		
<u>Acute</u>		
Oral		
LD50	Rat	140 mg/kg
Propetamphos (CAS 31218-83-4)		
<u>Acute</u>		
Dermal		
LD50	Rat	2300 mg/kg
Oral		
LD50	Rat	59.5 mg/kg

<sup>\*</sup> Estimates for product may be based on additional component data not shown.

**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.

**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

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)

BHC (beta isomer) (CAS 319-85-7)

Diazinon (CAS 333-41-5)

2B Possibly carcinogenic to humans.

2A Probably 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)

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

Hexachlorobenzene (CAS 118-74-1)

2B Possibly carcinogenic to humans.

2B Possibly carcinogenic to humans.

2B Possibly carcinogenic to humans.

Lindane (BHC gamma isomer) (CAS 58-89-9) 1 Carcinogenic to humans.

Malathion (CAS 121-75-5) 2A Probably carcinogenic to humans.

Methoxychlor (CAS 72-43-5) 3 Not classifiable as to carcinogenicity to humans.

Tetrachlorvinphos (CAS 22248-79-9)

2B Possibly carcinogenic 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)

BHC (alpha isomer) (CAS 319-84-6)

BHC (beta isomer) (CAS 319-85-7)

Hexachlorobenzene (CAS 118-74-1)

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

Reasonably Anticipated to be a Human Carcinogen.

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.

**Specific target organ toxicity -** May cause drowsiness and dizziness.

single exposure

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

May be fatal if swallowed and enters airways.

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

harmful.

## 12. Ecological information

**Ecotoxicity** 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 959-9	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	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	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
Bromophos ethyl (CAS 48	324-78-6)		
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	1.5 mg/l, 96 hours
Carbophenothion (CAS 7	86-19-6)		
Aquatic			
Fish	LC50	Atlantic silverside (Menidia menidia)	0.0057 - 0.0123 mg/l, 96 hours

Components		Species	Test Results
Chlorfenvinphos (CAS 47	(0-90-6)		
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	0.017 - 0.031 mg/l, 96 hours
Chlorpyrifos (CAS 2921-8	38-2)		
Aquatic			
Crustacea	EC50	Scud (Gammarus pulex)	0.0002 - 0.0005 mg/l, 48 hours
Fish	LC50	Tidewater silverside (Menidia peninsulae)	0.0007 - 0.0011 mg/l, 96 hours
Diazinon (CAS 333-41-5) <b>Aquatic</b>	1		
Crustacea	EC50	Water flea (Daphnia pulex)	0.0007 - 0.0012 mg/l, 48 hours
Fish	LC50	Common eel (Anguilla anguilla)	0.066 - 0.102 mg/l, 96 hours
			0.066 - 0.102 mg/l, 96 hours
Dichlofenthion (CAS 97-1  Aquatic	7-6)		
Fish	LC50	Cutthroat trout (Oncorhynchus clarki)	0.55 - 0.74 mg/l, 96 hours
Dieldrin (CAS 60-57-1)  Aquatic			<b>3</b> /
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
Ethion (CAS 563-12-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0 - 0.0001 mg/l, 48 hours
Fish	LC50	Guppy (Poecilia reticulata)	0.1 - 0.17 mg/l, 96 hours
Fenchlorphos (CAS 299-8  Aquatic	84-3)		
Crustacea	EC50	Brown shrimp (Penaeus aztecus)	0.0052 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0.305 mg/l, 96 hours
Heptachlor (CAS 76-44-8  Aquatic	3)		
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 1024-5  Aquatic		,	<b>3</b> /
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
Hexachlorobenzene (CAS		Ziaogiii (zoporiiio maorooriii ao)	0.000 0.007 2 mg/l, 00 moule
Aquatic	3 110 74 1)		
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1 mg/l, 96 hours
Lindane (BHC gamma iso			<b>.</b>
Aquatic	, (	,	
Crustacea	EC50	Water flea (Daphnia pulex)	0.386 - 0.547 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout	0.02 - 0.027 mg/l, 96 hours
		(Oncorhynchus mykiss)	<b>3</b> ·

Components		Species	Test Results
Malathion (CAS 121-75	-5)		
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.0007 - 0.0014 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	0.04 - 0.052 mg/l, 96 hours
Methoxychlor (CAS 72-4	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
Tetrachlorvinphos (CAS	3 22248-79-9)		
Aquatic			
Crustacea	EC50	Northern pink shrimp (Penaeus duorarum)	0.28 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.332 - 0.557 mg/l, 96 hours

3.93

### Persistence and degradability

### **Bioaccumulative potential**

Partition coefficient n-octanol / water (log Kow)
2,3,4,5-Tetrachloronitrobenzene
4 4'-DDD

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
Bromophos ethyl	6.15
Carbophenothion	5.33
Chlorfenvinphos	3.81
Chlorpyrifos	5.27
Diazinon	3.81
Dieldrin	5.4
Endrin	5.2
Ethion	5.073
Fenchlorphos	5.07
Heptachlor	6.1
Heptachlor epoxide (Isomer B)	5.4
Hexachlorobenzene	5.73
Lindane (BHC gamma isomer)	3.72
Malathion	2.36
Methoxychlor	5.08
n-Hexane	3.9
Pirimiphos-ethyl	4.85
Propetamphos	3.82
Tetrachlorvinphos	3.53
No. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	

Mobility in soil No data available.

Other adverse effects No other adve

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

<sup>\*</sup> Estimates for product may be based on additional component data not shown.

### 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

P050 a-Endosulfan (CAS 959-98-8) Aldrin (TM) (CAS 309-00-2) P004 b-Endosulfan (CAS 33213-65-9) P050 P037 Dieldrin (CAS 60-57-1) 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 = 5002 LBS), MARINE POLLUTANT (Chlorfenvinphos,

Malathion)

Transport hazard class(es)

3 **Class** Subsidiary risk Label(s) 3 Packing group Ш **Environmental hazards** 

> Yes Marine pollutant

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

Special provisions IB2, T4, TP1

150 Packaging exceptions Packaging non bulk 202 Packaging bulk 242

**IATA** 

UN1208 **UN number** 

Hexanes solution (n-Hexane) **UN proper shipping name** 

Transport hazard class(es)

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

Other information

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

Passenger and cargo

aircraft

Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

**IMDG** 

**UN** number UN1208

**UN** proper shipping name Transport hazard class(es) HEXANES SOLUTION (n-Hexane), MARINE POLLUTANT

Class 3 Subsidiary risk

**Packing group** 

**Environmental hazards** 

Yes Marine pollutant F-E, S-D **EmS** 

Ш

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

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) 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.
Chlorpyrifos (CAS 2921-88-2)	Listed.
Diazinon (CAS 333-41-5)	Listed.
Dieldrin (CAS 60-57-1)	Listed.

Endrin (CAS 72-20-8)	Listed.
Ethion (CAS 563-12-2)	Listed.
Heptachlor (CAS 76-44-8)	Listed.
Heptachlor epoxide (Isomer B) (CAS 1024-57-3)	Listed.
Hexachlorobenzene (CAS 118-74-1)	Listed.
Lindane (BHC gamma isomer) (CAS 58-89-9)	Listed.
Malathion (CAS 121-75-5)	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
Carbophenothion (CAS 786-19-6)	500 LBS
Chlorfenvinphos (CAS 470-90-6)	500 LBS
Endrin (CAS 72-20-8)	1 LBS
Ethion (CAS 563-12-2)	10 LBS
Lindane (BHC gamma isomer) (CAS 58-89-9)	1 LBS
Pirimiphos-ethyl (CAS 23505-41-1)	1000 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
Carbophenothion	786-19-6	500	500		
Chlorfenvinphos	470-90-6	500	500		
Endrin	72-20-8	1		500	10000
Ethion	563-12-2	10	1000		
Lindane (BHC gamma isomer)	58-89-9	1		1000	10000
Pirimiphos-ethyl	23505-41-1	1000	1000		

### SARA 311/312 Hazardous No

chemical

### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.	
n-Hexane	110-54-3	99.97	

### 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)

Hexachlorobenzene (CAS 118-74-1)

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 - 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 Listed: July 1, 1988 Aldrin (TM) (CAS 309-00-2) 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 Hexachlorobenzene (CAS 118-74-1) Listed: October 1, 1987 Lindane (BHC gamma isomer) (CAS 58-89-9) Listed: October 1, 1989 Malathion (CAS 121-75-5) Listed: May 20, 2016 Tetrachlorvinphos (CAS 22248-79-9) Listed: May 20, 2016

### 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, 1999Hexachlorobenzene (CAS 118-74-1)Listed: January 1, 1989o,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, 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	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

<sup>\*</sup>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** 11-09-2020

Version # 01

#### NFPA ratings

Health: 2 Flammability: 3 Instability: 0

Disclaimer

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