

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Custom Chlorinated Pesticides Mix
Product code : AL0-130050
Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Laboratory Use
Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Phenova
6390 Joyce Dr. Suite 100
80403 Golden, CO - United States
T 1-866-942-2978 - F 1-866-283-0269
info@phenova.com - www.phenova.com

1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924
ChemTel Assistance (International) +1 813-248-0585

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Skin Irrit. 2	H315
Repr. 2	H361
STOT SE 3	H336
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Repr.Cat.3; R62
Repr.Cat.3; R63
F; R11
Xn; R21/22
Xn; R48/20
Xi; R38
N; R50/53
R67

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) : Danger

Hazardous ingredients : aldrin; alpha-BHC; gamma-BHC; beta-BHC; delta-BHC; dieldrin; Endosulfan Sulfate; 4,4'-DDT; Endosulfan I (alpha isomer); Endosulfan II (beta isomer); toluene; hexane; chlorpyrifos; endrin; heptachlor; heptachlor epoxide (isomer B); Endrin Ketone

Hazard statements (CLP) : H225 - Highly flammable liquid and vapor
H302+H312 - Harmful if swallowed or in contact with skin
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) : P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P308+P313 - IF exposed or concerned: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P391 - Collect spillage
P403+P233 - Store in a well-ventilated place. Keep container tightly closed

No labeling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
toluene (Component)	(CAS No) 108-88-3 (EC no) 203-625-9 (EC index no) 601-021-00-3	50	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
hexane (Component)	(CAS No) 110-54-3 (EC no) 203-777-6 (EC index no) 601-037-00-0	47.7	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
aldrin (Component)	(CAS No) 309-00-2 (EC no) 206-215-8 (EC index no) 602-048-00-3	0.1	Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Dermal), H310 Carc. 2, H351 STOT RE 1, H372 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
alpha-BHC (Component)	(CAS No) 319-84-6 (EC no) 206-270-8 (EC index no) 602-042-00-0	0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Carc. 2, H351 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

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gamma-BHC (Component)	(CAS No) 58-89-9 (EC no) 200-401-2 (EC index no) 602-043-00-6	0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Lact., H362 STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
beta-BHC (Component)	(CAS No) 319-85-7 (EC no) 206-271-3 (EC index no) 602-042-00-0	0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
delta-BHC (Component)	(CAS No) 319-86-8 (EC no) 206-272-9 (EC index no) 602-042-00-0	0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
cis-Chlordane (Component)	(CAS No) 5103-71-9	0.1	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
dieldrin (Component)	(CAS No) 60-57-1 (EC no) 200-484-5 (EC index no) 602-049-00-9	0.1	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Carc. 2, H351 STOT RE 1, H372 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
Endosulfan Sulfate (Component)	(CAS No) 1031-07-8	0.1	Acute Tox. 1 (Oral), H300 Aquatic Acute 1, H400
4,4'-DDD (Component)	(CAS No) 72-54-8 (EC no) 200-783-0	0.1	Acute Tox. 4 (Dermal), H312 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
4,4'-DDE (Component)	(CAS No) 72-55-9 (EC no) 200-784-6	0.1	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
4,4'-DDT (Component)	(CAS No) 50-29-3 (EC no) 200-024-3 (EC index no) 602-045-00-7	0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Carc. 2, H351 STOT RE 1, H372 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
Endosulfan I (alpha isomer) (Component)	(CAS No) 959-98-8	0.1	Acute Tox. 2 (Oral), H300 Acute Tox. 4 (Dermal), H312 Acute Tox. 2 (Inhalation:dust,mist), H330 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Endosulfan II (beta isomer) (Component)	(CAS No) 33213-65-9	0.1	Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
Decachlorobiphenyl (Component)	(CAS No) 2051-24-3	0.1	Aquatic Acute 1, H400
chlorpyrifos (Component)	(CAS No) 2921-88-2 (EC no) 220-864-4 (EC index no) 015-084-00-4	0.1	Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
endrin (Component)	(CAS No) 72-20-8 (EC no) 200-775-7 (EC index no) 602-051-00-X	0.1	Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410 (M=1000)
heptachlor (Component)	(CAS No) 76-44-8 (EC no) 200-962-3 (EC index no) 602-046-00-2	0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Carc. 2, H351 STOT RE 2, H373 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
heptachlor epoxide (isomer B) (Component)	(CAS No) 1024-57-3 (EC no) 213-831-0 (EC index no) 602-063-00-5	0.1	Acute Tox. 3 (Oral), H301 Carc. 2, H351 STOT RE 2, H373 Aquatic Acute 1, H400 (M=10000) Aquatic Chronic 1, H410 (M=10000)
Endrin Ketone (Component)	(CAS No) 53494-70-5	0.1	Acute Tox. 2 (Oral), H300
Name	Product identifier	Specific concentration limits	
hexane (Component)	(CAS No) 110-54-3 (EC no) 203-777-6 (EC index no) 601-037-00-0	(C >= 5) STOT RE 2, H373	

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First-aid measures after 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.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. Causes skin irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapor.
Explosion hazard	: May form flammable/explosive vapor-air mixture.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapors/spray.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up in absorbent material. Collect spillage.
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6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Handle empty containers with care because residual vapors are flammable.
Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area.
Hygiene measures	: Do not eat, drink or smoke when using this product. Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

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7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
- Storage conditions : Keep in fireproof place. Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.
- Incompatible materials : Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

cis-Chlordane (5103-71-9)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.5 mg/m ³
4,4'-DDT (50-29-3)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³

8.2. Exposure controls

- Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.
- Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



- Hand protection : Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.
- Eye protection : Chemical goggles or safety glasses. Safety glasses.
- Skin and body protection : Wear suitable protective clothing. Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.
- Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
- Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Color : Colorless.
- Odor : characteristic.
- pH : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : Highly flammable liquid and vapor
- Relative density : No data available
- Solubility : No data available
- Explosive properties : No data available
- Oxidizing properties : No data available
- Explosion limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

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10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin.

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ATE CLP (oral)	360.102 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
aldrin (309-00-2)	
LD50 oral rat	38 mg/kg (Rat)
LD50 dermal rat	90 mg/kg (Rat)
ATE CLP (oral)	38.000 mg/kg body weight
ATE CLP (dermal)	90.000 mg/kg body weight
alpha-BHC (319-84-6)	
LD50 oral rat	177 mg/kg (Rat)
ATE CLP (oral)	177.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
beta-BHC (319-85-7)	
ATE CLP (oral)	100.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
delta-BHC (319-86-8)	
ATE CLP (oral)	100.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
gamma-BHC (58-89-9)	
LD50 oral rat	76 mg/kg (Rat; Literature study)
LD50 dermal rat	1000 mg/kg (Rat; Literature study)
LC50 inhalation rat (mg/l)	1.56 mg/l/4h (Rat; Literature study)
ATE CLP (oral)	76.000 mg/kg body weight
ATE CLP (dermal)	1000.000 mg/kg body weight
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	1.560 mg/l/4h
ATE CLP (dust, mist)	1.560 mg/l/4h
cis-Chlordane (5103-71-9)	
LD50 oral rat	540 mg/kg
ATE CLP (oral)	540.000 mg/kg body weight
4,4'-DDD (72-54-8)	
LD50 dermal rabbit	1200 mg/kg
ATE CLP (dermal)	1200.000 mg/kg body weight
4,4'-DDE (72-55-9)	
LD50 oral rat	880 mg/kg
ATE CLP (oral)	880.000 mg/kg body weight
4,4'-DDT (50-29-3)	
LD50 oral rat	87 mg/kg
LD50 dermal rabbit	300 mg/kg
ATE CLP (oral)	87.000 mg/kg body weight
ATE CLP (dermal)	300.000 mg/kg body weight
dieldrin (60-57-1)	
LD50 oral rat	38 mg/kg (Rat)
ATE CLP (oral)	38.000 mg/kg body weight
ATE CLP (dermal)	5.000 mg/kg body weight

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Endosulfan I (alpha isomer) (959-98-8)	
LD50 oral rat	76 ml/kg
ATE CLP (oral)	5.000 mg/kg body weight
ATE CLP (dermal)	1100.000 mg/kg body weight
Endosulfan II (beta isomer) (33213-65-9)	
LD50 oral rat	240 mg/kg
ATE CLP (oral)	240.000 mg/kg body weight
Endosulfan Sulfate (1031-07-8)	
LD50 oral rat	18 mg/kg
ATE CLP (oral)	0.500 mg/kg body weight
endrin (72-20-8)	
LD50 oral rat	3 mg/kg (Rat)
LD50 dermal rat	12 mg/kg (Rat)
LD50 dermal rabbit	60 mg/kg (Rabbit)
ATE CLP (oral)	3.000 mg/kg body weight
ATE CLP (dermal)	12.000 mg/kg body weight
Endrin Ketone (53494-70-5)	
LD50 oral rat	10 mg/kg
ATE CLP (oral)	10.000 mg/kg body weight
heptachlor (76-44-8)	
LD50 oral rat	130 mg/kg (Rat)
LD50 dermal rat	119 mg/kg (Rat)
LC50 inhalation rat (mg/l)	> 2 mg/l/4h (Rat)
ATE CLP (oral)	130.000 mg/kg body weight
ATE CLP (dermal)	119.000 mg/kg body weight
heptachlor epoxide (isomer B) (1024-57-3)	
LD50 oral rat	60 mg/kg (Rat)
ATE CLP (oral)	60.000 mg/kg body weight
chlorpyrifos (2921-88-2)	
LD50 oral rat	82 mg/kg (Rat)
ATE CLP (oral)	82.000 mg/kg body weight
toluene (108-88-3)	
LD50 oral rat	> 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 5580 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	12223 mg/kg (Rabbit; Literature study; Other; >5000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	> 20 mg/l/4h (Rat; Literature study)
ATE CLP (dermal)	12223.000 mg/kg body weight
hexane (110-54-3)	
LD50 oral rat	16000 mg/kg body weight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	> 3350 mg/kg body weight (Rabbit; Read-across; Equivalent or similar to OECD 402)
ATE CLP (oral)	16000.000 mg/kg body weight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met
Respiratory or skin sensitization	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met May cause cancer
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (single exposure)	: May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met

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Potential Adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

aldrin (309-00-2)	
LC50 fish 1	0.013 mg/l (LC50; 96 h)
alpha-BHC (319-84-6)	
LC50 fish 1	0.01 - 4.4 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.1 mg/l (EC50; 227 h)
beta-BHC (319-85-7)	
LC50 fish 1	0.01 - 4.4 mg/l (LC50; 96 h)
Threshold limit algae 2	< 1 mg/l (EC0; 120 h)
delta-BHC (319-86-8)	
LC50 fish 1	0.01 - 4.4 mg/l (LC50; 96 h)
Threshold limit algae 1	< 2.0 mg/l (EC50; 524 h)
gamma-BHC (58-89-9)	
EC50 Daphnia 1	0.516 mg/l (EC50; 48 h)
LC50 fish 2	0.022 mg/l (LC50; 96 h)
cis-Chlordane (5103-71-9)	
LC50 fish 1	0.0074 mg/l <i>Lepomis macrochirus</i> (Bluegill) 96 H
4,4'-DDD (72-54-8)	
LC50 fish 1	0.04 - 0.05 mg/l <i>Lepomis macrochirus</i> (Bluegill) 96.0 h
LC50 other aquatic organisms 1	0.06 - 0.09 mg/l <i>Oncorhynchus mykiss</i> (rainbow trout) 96.0 h
EC50 Daphnia 1	0.01 mg/l <i>Daphnia pulex</i> (Water flea) 48 H
LC50 fish 2	3.47 - 5.58 mg/l <i>Pimephales promelas</i> (fathead minnow) 96.0 h
4,4'-DDE (72-55-9)	
LC50 fish 1	0.2 - 0.3 mg/l <i>Lepomis macrochirus</i> (Bluegill) 96 h
LC50 other aquatic organisms 1	0.05 - 0.18 mg/l <i>Salmo salar</i> (Atlantic salmon) 96 h
LC50 fish 2	0.03 - 0.04 mg/l <i>Oncorhynchus mykiss</i> (rainbow trout) 96 h
4,4'-DDT (50-29-3)	
LC50 fish 1	0.01 mg/l <i>Pimephales promelas</i> (fathead minnow) 96 h
LC50 other aquatic organisms 1	0.0034 mg/l <i>Oncorhynchus mykiss</i> (rainbow trout) 96 h
EC50 Daphnia 1	0.00108 mg/l Immobilization - <i>Daphnia magna</i> (Water flea) 48 h
LC50 fish 2	0.01 mg/l <i>Lepomis macrochirus</i> (Bluegill) 96 h
LOEC (acute)	150 mg/l <i>Oncorhynchus mykiss</i> (rainbow trout) 3 d
NOEC (acute)	113 mg/l <i>Oncorhynchus mykiss</i> (rainbow trout) 3 d
dieldrin (60-57-1)	
LC50 fish 1	0.0012 mg/l (LC50; 96 h; <i>Salmo gairdneri</i>)
EC50 Daphnia 1	0.19 mg/l (EC50; 48 h)
Threshold limit algae 1	> 100 ppm (EC50)
Endosulfan II (beta isomer) (33213-65-9)	
LC50 fish 1	0.0066 mg/l 96 H
EC50 Daphnia 1	0.1 - 1 mg/l <i>Daphnia magna</i> (Water flea) 48 H
Endosulfan Sulfate (1031-07-8)	
LC50 fish 1	0.01 - 0.1 mg/l <i>Carassius auratus</i> (goldfish)
EC50 other aquatic organisms 1	0.76 mg/l EC50 (<i>Daphnia Magna</i>)
endrin (72-20-8)	
LC50 fish 2	0.0006 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.0042 mg/l (EC50; 48 h)
Endrin Ketone (53494-70-5)	
LC50 fish 1	1640 mg/l <i>Pimephales promelas</i> (fathead minnow) 96 H
EC50 Daphnia 1	3600 mg/l <i>Daphnia magna</i> (Water flea) 48 H
heptachlor (76-44-8)	
LC50 fish 1	0.007 mg/l (LC50; 96 h)
EC50 Daphnia 1	0.042 mg/l (EC50; 48 h)

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heptachlor epoxide (isomer B) (1024-57-3)	
EC50 Daphnia 1	0.00004 mg/l (LC50; 96 h)
LC50 fish 2	5.37 mg/l (LC50; 96 h)
chlorpyrifos (2921-88-2)	
LC50 fish 2	0.003 mg/l (LC50; 96 h)
LC50 other aquatic organisms 2	0.0017 mg/l (Daphnia magna)
Threshold limit algae 1	0.228 mg/l (EC50; 96 h)
hexane (110-54-3)	
LC50 fish 1	2.5 mg/l (LC50; 96 h)
EC50 Daphnia 1	2.1 mg/l (EC50; 48 h)
Threshold limit algae 2	26 mg/l (EbC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system)

12.2. Persistence and degradability

Custom Chlorinated Pesticides Mix	
Persistence and degradability	May cause long-term adverse effects in the environment.
aldrin (309-00-2)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil. Photodegradation in the air.
alpha-BHC (319-84-6)	
Persistence and degradability	Not readily biodegradable in water.
beta-BHC (319-85-7)	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
delta-BHC (319-86-8)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water.
gamma-BHC (58-89-9)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Biodegradable in the soil under anaerobic conditions. No inhibition of biodegradation process in the soil. Not readily biodegradable in the soil. Adsorbs into the soil.
ThOD	0.66 g O ₂ /g substance
dieldrin (60-57-1)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
endrin (72-20-8)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
heptachlor (76-44-8)	
Persistence and degradability	Not readily biodegradable in water.
heptachlor epoxide (isomer B) (1024-57-3)	
Persistence and degradability	Forming sediments in water. Adsorbs into the soil.
chlorpyrifos (2921-88-2)	
Persistence and degradability	Not readily biodegradable in water.
toluene (108-88-3)	
Persistence and degradability	Readily biodegradable in water. easily degradable in the soil.
Biochemical oxygen demand (BOD)	2.15 g O ₂ /g substance
Chemical oxygen demand (COD)	2.52 g O ₂ /g substance
ThOD	3.13 g O ₂ /g substance
BOD (% of ThOD)	0.69
hexane (110-54-3)	
Persistence and degradability	Readily biodegradable in water. Photooxidation in water. easily degradable in the soil.
ThOD	3.52 g O ₂ /g substance
BOD (% of ThOD)	0.63 (Literature study)

12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
aldrin (309-00-2)	
BCF fish 1	20000 (BCF)
BCF other aquatic organisms 1	12260 (BCF)

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aldrin (309-00-2)	
BCF other aquatic organisms 2	350 - 4500 (BCF)
Log Pow	5.52 - 7.4 (Experimental value)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
alpha-BHC (319-84-6)	
BCF fish 1	17000 (BCF; 24 h; Poecilia reticulata)
BCF fish 2	540 (BCF; 24 h)
BCF other aquatic organisms 1	160 (BCF)
BCF other aquatic organisms 2	> 8000 (BCF; 24 h; Artemia salina)
Log Pow	3.81 - 3.89
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
beta-BHC (319-85-7)	
BCF fish 1	1485 (BCF; 504 h; Poecilia reticulata)
BCF fish 2	273 (BCF; 504 h; Cyprinus carpio)
BCF other aquatic organisms 1	127 (BCF; 72 h)
BCF other aquatic organisms 2	37 - 831 (BCF; 24 h)
Log Pow	3.8 - 4.5
Bioaccumulative potential	Potential for bioaccumulation ($500 \leq \text{BCF} \leq 5000$).
delta-BHC (319-86-8)	
BCF fish 1	813 (BCF)
BCF fish 2	648 (BCF; 96 h)
BCF other aquatic organisms 1	272 (BCF; 72 h)
BCF other aquatic organisms 2	326 - 2806 (BCF; 48 h)
Log Pow	2.80 - 4.38
Bioaccumulative potential	Potential for bioaccumulation ($500 \leq \text{BCF} \leq 5000$).
gamma-BHC (58-89-9)	
BCF other aquatic organisms 1	2610 (BCF)
BCF other aquatic organisms 2	240 (BCF; 24 h)
Log Pow	3.57 (Experimental value)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
4,4'-DDD (72-54-8)	
Log Pow	6.02
4,4'-DDE (72-55-9)	
BCF fish 1	12037 Gambusia affinis (Mosquito fish)
Log Pow	6.51
4,4'-DDT (50-29-3)	
BCF fish 1	46670 Oncorhynchus mykiss (rainbow trout) 20 d
Log Pow	6.91
dieldrin (60-57-1)	
BCF fish 1	3300 (BCF)
BCF fish 2	4430 (BCF)
BCF other aquatic organisms 1	2880 (BCF; 168 h)
BCF other aquatic organisms 2	1570 (BCF; 50 h)
Log Pow	5.4 - 5.61 (Experimental value)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
endrin (72-20-8)	
BCF fish 1	15000 (BCF)
BCF fish 2	6400 (BCF)
BCF other aquatic organisms 1	500 - 2780 (BCF)
BCF other aquatic organisms 2	1920 (BCF; 50 h)
Log Pow	4.56 - 5.2 (Experimental value)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
heptachlor (76-44-8)	
BCF fish 1	17300 (BCF)
BCF fish 2	21300 (BCF; 96 h)
BCF other aquatic organisms 1	200 - 8500 (BCF)
BCF other aquatic organisms 2	17600 (BCF)
Log Pow	5.05 - 6.13
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).

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heptachlor epoxide (isomer B) (1024-57-3)	
BCF fish 1	14455 (BCF; 672 h)
BCF other aquatic organisms 1	1700 (BCF; 50 h)
BCF other aquatic organisms 2	10630 (BCF)
Log Pow	4.43 - 5.40
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).

chlorpyrifos (2921-88-2)	
BCF fish 1	1700 (BCF)
BCF fish 2	49 - 2880 (BCF)
BCF other aquatic organisms 1	1 - 10 mg/l (BCF; 120 h; Algae)
Log Pow	4.82 - 5.27
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).

toluene (108-88-3)	
BCF fish 2	90 (BCF; 72 h; Leuciscus idus; Static system; Fresh water)
Log Pow	2.73 (Experimental value; Other; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

hexane (110-54-3)	
BCF fish 1	501.187 (BCF; Other; Pimephales promelas)
Log Pow	3.5 - 3.94 (Calculated)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

12.4. Mobility in soil

aldrin (309-00-2)	
Ecology - soil	Soil contaminant. Not toxic to plants. Toxic to bees.

gamma-BHC (58-89-9)	
Log Koc	log Koc,3.04
Ecology - soil	Toxic to bees.

dieldrin (60-57-1)	
Ecology - soil	Soil contaminant. Toxic to bees.

endrin (72-20-8)	
Ecology - soil	Toxic to flora. Toxic to fauna. Toxic to bees.

heptachlor (76-44-8)	
Ecology - soil	Not toxic to plants. Not toxic to bees in normal conditions of use.

chlorpyrifos (2921-88-2)	
Ecology - soil	Toxic to bees. May be harmful to plant growth, blooming and fruit formation.

toluene (108-88-3)	
Surface tension	0.03 N/m (20 °C)

hexane (110-54-3)	
Surface tension	0.018 N/m (25 °C; 1 g/l)
Log Koc	Koc,2187.76; QSAR; log Koc; 3.34; QSAR

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1993
UN-No.(IATA) : 1993
UN-No. (IMDG) : 1993
UN-No.(ADN) : 1993

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14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, N.O.S.
Proper Shipping Name (IATA) : Flammable liquid, n.o.s.
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.
Proper Shipping Name (ADN) : FLAMMABLE LIQUID, N.O.S.
Transport document description (ADR) : UN 1993 FLAMMABLE LIQUID, N.O.S., 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS

14.3. Packing group

Class (ADR) : 3
Classification code (ADR) : F1
Class (IATA) : 3
Class (IMDG) : 3
Class (ADN) : 3
Classification code (ADN) : F1
Hazard labels (ADR) : 3



Hazard labels (IATA) : 3



Hazard labels (IMDG) : 3



Hazard labels (ADN) : 3

14.4. Packing group

Packing group (ADR) : II
Packing group (IATA) : II
Packing group (IMDG) : II
Packing group (ADN) : II

14.5. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 33
Classification code (ADR) : F1
Orange plates :



Special provision (ADR) : 274, 601, 640D
Transport category (ADR) : 2
Tunnel restriction code (ADR) : D/E
Limited quantities (ADR) : 1I
Excepted quantities (ADR) : E2

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14.6.2. Transport by sea

Special provision (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP8, TP28
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: B

14.6.3. Air transport

CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
PCA packing instructions (IATA)	: 353
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA max net quantity (IATA)	: 5L
PCA Excepted quantities (IATA)	: E2
Special provision (IATA)	: A3
ERG code (IATA)	: 3H

14.6.4. Inland waterway transport

Special provision (ADN)	: 274, 601, 640D
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1
Carriage prohibited (ADN)	: No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions
Contains no REACH candidate substance
Contains no REACH Annex XIV substances.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Other information	: None.

PHV SDS EU

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