1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>Chlordecone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>45379</td>
</tr>
<tr>
<td>Brand</td>
<td>Fluka</td>
</tr>
<tr>
<td>Product Use</td>
<td>For laboratory research purposes.</td>
</tr>
<tr>
<td>Supplier</td>
<td>Sigma-Aldrich Canada Co. 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA</td>
</tr>
<tr>
<td>Telephone</td>
<td>+1 9058299500</td>
</tr>
<tr>
<td>Fax</td>
<td>+1 9058299292</td>
</tr>
<tr>
<td>Emergency Phone # (For both supplier and manufacturer)</td>
<td>1-800-424-9300</td>
</tr>
<tr>
<td>Preparation Information</td>
<td>Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956</td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs
Liver, Central nervous system, Testes, Endocrine system.

WHMIS Classification

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1B</td>
<td>Toxic Material Causing Immediate and Serious Toxic Effects</td>
<td>Toxic by ingestion</td>
</tr>
<tr>
<td>D2A</td>
<td>Very Toxic Material Causing Other Toxic Effects</td>
<td>Toxic by skin absorption</td>
</tr>
</tbody>
</table>

GHS Classification

Acute toxicity, Dermal (Category 3)
Acute toxicity, Oral (Category 3)
Carcinogenicity (Category 2)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H301 + H311 Toxic if swallowed or in contact with skin
H351 Suspected of causing cancer.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
Call a POISON CENTER or doctor/physician if you feel unwell.
Dispose of contents/container to an approved waste disposal plant.

HMIS Classification
- Health hazard: 2
- Chronic Health Hazard: *
- Flammability: 1
- Physical hazards: 0

Potential Health Effects
- **Inhalation**: May be harmful if inhaled. May cause respiratory tract irritation.
- **Skin**: Toxic if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.
- **Ingestion**: Toxic if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Formula**: C₁₀Cl₁₀O
**Molecular Weight**: 490.64 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlordecone</td>
<td>143-50-0</td>
<td>205-601-3</td>
<td>606-019-00-6</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**
Flush eyes with water as a precaution.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIREFIGHTING MEASURES

**Conditions of flammability**
Not flammable or combustible.

**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**
Wear self-contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

**Explosion data - sensitivity to mechanical impact**
no data available

**Explosion data - sensitivity to static discharge**
no data available

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE
Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Specific engineering controls
Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form solid
10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
LD50 Oral - rat - 91.3 mg/kg

Inhalation LC50
no data available

Dermal LD50
LD50 Dermal - rabbit - 345 mg/kg

Other information on acute toxicity
no data available

**Skin corrosion/irritation**
no data available

**Serious eye damage/eye irritation**
no data available

**Respiratory or skin sensitisation**
no data available

**Germ cell mutagenicity**
Genotoxicity in vitro - Hamster - ovary
Sister chromatid exchange
Genotoxicity in vivo - Quail - Oral
sperm

**Carcinogenicity**
Carcinogenicity - mouse - Oral
Tumorigenic:Carcinogenic by RTECS criteria. Liver:Tumors.
Carcinogenicity - rat - Oral
Tumorigenic:Carcinogenic by RTECS criteria. Liver:Tumors.
Limited evidence of carcinogenicity in animal studies

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Chlordecone)
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**Reproductive toxicity**
Reproductive toxicity - rat - Oral
Effects on Newborn: Biochemical and metabolic.
Reproductive toxicity - rat - Oral
Effects on Newborn: Behavioral.
Reproductive toxicity - rat - Oral
Effects on Newborn: Other postnatal measures or effects.
Reproductive toxicity - rat - Intraperitoneal
Maternal Effects: Uterus, cervix, vagina.
Reproductive toxicity - rat - Intraperitoneal
Maternal Effects: Menstrual cycle changes or disorders. Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles). Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated).
Reproductive toxicity - rat - Intraperitoneal
Maternal Effects: Other effects.
Reproductive toxicity - rat - Intraperitoneal
Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).
Reproductive toxicity - rat - Subcutaneous
Maternal Effects: Ovaries, fallopian tubes.
Reproductive toxicity - rat - Subcutaneous
Maternal Effects: Uterus, cervix, vagina.
Reproductive toxicity - mouse - Oral
Effects on Fertility: Other measures of fertility
Reproductive toxicity - mouse - Oral
Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive). Effects on Newborn: Growth statistics (e.g., reduced weight gain).
Reproductive toxicity - mouse - Oral
Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Effects on Newborn: Growth statistics (e.g., reduced weight gain).
no data available

**Teratogenicity**

*Developmental Toxicity - rat - Oral*
Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Urogenital system. Specific Developmental Abnormalities: Homeostasis

*Developmental Toxicity - mouse - Oral*
Effects on Embryo or Fetus: Fetal death. Specific Developmental Abnormalities: Musculoskeletal system.

*Developmental Toxicity - rat - Oral*
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**
no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**
no data available

**Aspiration hazard**
no data available

**Potential health effects**

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Inhalation</td>
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<td>Ingestion</td>
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<td>Skin</td>
<td>Toxic if absorbed through skin. May cause skin irritation.</td>
</tr>
<tr>
<td>Eyes</td>
<td>May cause eye irritation.</td>
</tr>
</tbody>
</table>

**Signs and Symptoms of Exposure**
Tremors, Ataxia., Liver injury may occur., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**
no data available

**Additional Information**
RTECS: PC8575000

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**12. ECOLOGICAL INFORMATION**

**Toxicity**

<table>
<thead>
<tr>
<th>Type</th>
<th>LC50 - Oncorhynchus mykiss (rainbow trout) - 0.03 mg/l - 96.0 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to fish</td>
<td></td>
</tr>
<tr>
<td>Toxicity to daphnia and other aquatic invertebrates</td>
<td>EC50 - Daphnia magna (Water flea) - 0.26 mg/l - 48 h</td>
</tr>
<tr>
<td>Toxicity to algae</td>
<td>Growth inhibition EC50 - Chlorococcum sp. - 0.35 µg/l - 7 d</td>
</tr>
</tbody>
</table>

**Persistence and degradability**
no data available

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Bioaccumulation</th>
<th>Lepomis macrochirus - 28 d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioconcentration factor (BCF):</td>
<td>10,606</td>
</tr>
</tbody>
</table>

**Mobility in soil**
no data available

**PBT and vPvB assessment**
no data available

**Other adverse effects**
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2811  Class: 6.1  Packing group: III
Proper shipping name: Toxic solids, organic, n.o.s. (Chlordecone)
Reportable Quantity (RQ): 1 lbs
Marine pollutant: Marine pollutant
Poison Inhalation Hazard: No

IMDG
UN number: 2811  Class: 6.1  Packing group: III  EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Chlordecone)
Marine pollutant: No

IATA
UN number: 2811  Class: 6.1  Packing group: III
Proper shipping name: Toxic solid, organic, n.o.s. (Chlordecone)

15. REGULATORY INFORMATION

WHMIS Classification
D1B  Toxic Material Causing Immediate and Serious Toxic Effects  Toxic by ingestion
D2A  Very Toxic Material Causing Other Toxic Effects  Toxic by skin absorption  Carcinogen

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Further information
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