SAFETY DATA SHEET
according to the Hazardous Products Regulations

Ethion / Chlorpyrifos / Alpha-Cypermethrin
Formulation

SECTION 1. IDENTIFICATION

Product name : Ethion / Chlorpyrifos / Alpha-Cypermethrin Formulation
Other means of identification : No data available

Manufacturer or supplier's details
Company name of supplier : Merck & Co., Inc
Address : 126 E. Lincoln Avenue
Rahway, New Jersey U.S.A. 07065
Telephone : 908-740-4000
Emergency telephone : 1-908-423-6000
E-mail address : EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use
Recommended use : Veterinary product
Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations
Flammable liquids : Category 3
Acute toxicity (Oral) : Category 3
Acute toxicity (Inhalation) : Category 4
Acute toxicity (Dermal) : Category 3
Skin irritation : Category 2
Serious eye damage : Category 1
Germ cell mutagenicity : Category 1B
Carcinogenicity : Category 1B
Reproductive toxicity : Category 1B
Specific target organ toxicity - single exposure : Category 1 (Central nervous system, Nervous system)
Specific target organ toxicity - single exposure : Category 3
Specific target organ toxicity - repeated exposure : Category 1 (Central nervous system)
Aspiration hazard : Category 1
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<tr>
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</thead>
<tbody>
<tr>
<td>7.0</td>
<td>09/30/2023</td>
<td>934967-00016</td>
<td>04/04/2023</td>
<td>10/12/2016</td>
</tr>
</tbody>
</table>

**GHS label elements**

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Flammable" /> <img src="image" alt="Toxic" /> <img src="image" alt="Skin irritation" /> <img src="image" alt="Eye damage" /> <img src="image" alt="Cancer" /></td>
</tr>
</tbody>
</table>

**Signal Word**: Danger

**Hazard Statements**

- H226 Flammable liquid and vapor.
- H301 + H311 Toxic if swallowed or in contact with skin.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H336 May cause drowsiness or dizziness.
- H340 May cause genetic defects.
- H350 May cause cancer.
- H360D May damage the unborn child.
- H370 Causes damage to organs (Central nervous system, Nervous system).
- H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure.

**Precautionary Statements**

**Prevention:**

- P201 Obtain special instructions before use.
- 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.
- P260 Do not breathe mist or vapors.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves, protective clothing, eye protection and face protection.

**Response:**

- P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER. Rinse mouth.
- P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a doctor if you feel unwell.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER.
- P308 + P311 IF exposed or concerned: Call a doctor.
P331 Do NOT induce vomiting. 
P332 + P313 If skin irritation occurs: Get medical attention. 
P361 + P364 Take off immediately all contaminated clothing and wash it before reuse. 

**Storage:** 
P405 Store locked up. 

**Disposal:** 
P501 Dispose of contents and container to an approved waste disposal plant. 

**Other hazards** 
Vapors may form explosive mixture with air. 

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS 

**Substance / Mixture:** Mixture 

**Components**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common Name/Synonym</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aromatic</td>
<td>No data available</td>
<td>64742-95-6</td>
<td>&gt;= 30 - &lt; 60 *</td>
</tr>
<tr>
<td>Ethion</td>
<td>O,O,O',O'-tetraethyl S,S'-methylenedi(phosphorodithioate)</td>
<td>563-12-2</td>
<td>&gt;= 10 - &lt; 30 *</td>
</tr>
<tr>
<td>Chlorpyrifos</td>
<td>2-Pyridinol,3,5,6-trichloro-α-ester with o,o-diethylphosphorothioate</td>
<td>2921-88-2</td>
<td>&gt;= 5 - &lt; 10 *</td>
</tr>
<tr>
<td>2-Methyl-1-propanol</td>
<td>Isobutanol</td>
<td>78-83-1</td>
<td>&gt;= 5 - &lt; 10 *</td>
</tr>
<tr>
<td>(S)-α-Cyano-3-phenoxoxygenbenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropane-carboxylate</td>
<td>Cyclopropane-carboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-(R)-cyano(3-phenoxyphenyl)methyl ester, (1S,3S)-rel-</td>
<td>67375-30-8</td>
<td>&gt;= 5 - &lt; 10 *</td>
</tr>
<tr>
<td>Hydrocarbons, C10, aromatics, &lt;1% naphthalene</td>
<td>Solvent naphtha (petroleum), heavy arom.</td>
<td>64742-94-5</td>
<td>&gt;= 1 - &lt; 5 *</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-phenol</td>
<td>Phenol, 2,6-</td>
<td>128-37-0</td>
<td>&gt;= 1 - &lt; 5 *</td>
</tr>
</tbody>
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Section 4. First Aid Measures

General advice: In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.

If inhaled: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention immediately.

If swallowed: If swallowed, DO NOT induce vomiting. If vomiting occurs have person lean forward. Call a physician or poison control center immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: Toxic if swallowed or in contact with skin. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye damage. Harmful if inhaled. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. May damage the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Protection of first-aiders: First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician: Treat symptomatically and supportively.

Section 5. Fire-Fighting Measures

Suitable extinguishing media: Water spray, Alcohol-resistant foam.
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</tr>
</tbody>
</table>

- **Carbon dioxide (CO2)**
- **Dry chemical**

#### Unsuitable extinguishing media
- High volume water jet

#### Specific hazards during fire fighting
- Do not use a solid water stream as it may scatter and spread fire.
- Flash back possible over considerable distance.
- Vapors may form explosive mixtures with air.
- Exposure to combustion products may be a hazard to health.

#### Hazardous combustion products
- Carbon oxides
- Sulfur oxides
- Oxides of phosphorus
- Chlorine compounds
- Nitrogen oxides (NOx)

#### Specific extinguishing methods
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Use water spray to cool unopened containers.
- Remove undamaged containers from fire area if it is safe to do so.
- Evacuate area.

#### Special protective equipment for fire-fighters
- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures
- Remove all sources of ignition.
- Use personal protective equipment.
- Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

#### Environmental precautions
- Avoid release to the environment.
- Prevent further leakage or spillage if safe to do so.
- Prevent spreading over a wide area (e.g., by containment or oil barriers).
- Retain and dispose of contaminated wash water.
- Local authorities should be advised if significant spills cannot be contained.

#### Methods and materials for containment and cleaning up
- Non-sparking tools should be used.
- Soak up with inert absorbent material.
- Suppress (knock down) gases/vapors/mists with a water spray jet.
- For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
- Clean up remaining materials from spill with suitable absorbent.
- Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to
determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation: If sufficient ventilation is unavailable, use local exhaust ventilation. Use explosion-proof electrical, ventilating and lighting equipment.

Advice on safe handling: Do not get on skin or clothing. Do not breathe mist or vapors. Do not swallow. Do not get in eyes. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment. Non-sparking tools should be used. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment.


Materials to avoid: Do not store with the following product types: Strong oxidizing agents Self-reactive substances and mixtures Organic peroxides Flammable solids Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures which in contact with water emit flammable gases Explosives Gases Very acutely toxic substances and mixtures
### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aromatic</td>
<td>64742-95-6</td>
<td>TWA</td>
<td>200 mg/m³ (total hydrocarbon vapor)</td>
<td>CA AB OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 mg/m³ (total hydrocarbon vapor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethion</td>
<td>563-12-2</td>
<td>TWA</td>
<td>4 µg/m³ (OEB 4)</td>
<td>Internal</td>
</tr>
<tr>
<td>Further information: Skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wipe limit</td>
<td></td>
<td>40 µg/100 cm²</td>
<td>Internal</td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>0.05 mg/m³</td>
<td>CA AB OEL</td>
<td></td>
</tr>
<tr>
<td>TWA (Inhalable)</td>
<td></td>
<td>0.05 mg/m³</td>
<td>CA BC OEL</td>
<td></td>
</tr>
<tr>
<td>TWAEV (Inhalable fraction and vapor)</td>
<td></td>
<td>0.05 mg/m³</td>
<td>CA QC OEL</td>
<td></td>
</tr>
<tr>
<td>TWA (Inhalable fraction and vapor)</td>
<td></td>
<td>0.05 mg/m³</td>
<td>ACGIH</td>
<td></td>
</tr>
<tr>
<td>Ethion</td>
<td></td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>CA AB OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWAEV</td>
<td>0.2 mg/m³</td>
<td>CA QC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Inhalable fraction and vapor)</td>
<td>0.1 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>2-Methyl-1-propanol</td>
<td>78-83-1</td>
<td>TWA</td>
<td>50 ppm</td>
<td>CA AB OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>152 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>50 ppm</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWAEV</td>
<td>50 ppm</td>
<td>CA QC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>152 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>50 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Hydrocarbons, C10, aromatics, &lt;1% naphthalene</td>
<td>64742-94-5</td>
<td>TWA (Mist)</td>
<td>5 mg/m³</td>
<td>CA AB OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL (Mist)</td>
<td>10 mg/m³</td>
<td>CA AB OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Mist)</td>
<td>1 mg/m³</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWAEV (Mist - Inhalable dust)</td>
<td>5 mg/m³</td>
<td>CA QC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>128-37-0</td>
<td>TWA</td>
<td></td>
<td>10 mg/m³</td>
<td>CA AB OEL</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Vapour and inhalable aerosols)</td>
<td></td>
<td>2 mg/m³</td>
<td>CA BC OEL</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWAEV (inhalable fraction and vapour)</td>
<td></td>
<td>2 mg/m³</td>
<td>CA QC OEL</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Inhalable fraction and vapor)</td>
<td></td>
<td>2 mg/m³</td>
<td>ACGIH</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

Engineering measures:
- Minimize workplace exposure concentrations.
- If sufficient ventilation is unavailable, use with local exhaust ventilation.
- Use explosion-proof electrical, ventilating and lighting equipment.

Personal protective equipment

Respiratory protection:
- If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type:
- Combined particulates and organic vapor type

Hand protection:
- Chemical-resistant gloves

Remarks:
- Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often!
- For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before breaks and at the end of workday.
### Eye protection
Wear the following personal protective equipment:
- Chemical resistant goggles must be worn.
- If splashes are likely to occur, wear:
  - Face-shield

### Skin and body protection
Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
- Wear the following personal protective equipment:
  - If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.
  - Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

### Hygiene measures
- If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
- When using do not eat, drink or smoke.
- Wash contaminated clothing before re-use.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>strong</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>43 ºC</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (liquids)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
</tbody>
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Relative vapor density : No data available
Relative density : 0.96 - 1.02
Density : No data available
Solubility(ies)
   Water solubility : No data available
Partition coefficient: n-octanol/water : No data available
Autoignition temperature : No data available
Decomposition temperature : No data available
Viscosity
   Viscosity, kinematic : No data available
Explosive properties : Not explosive
Oxidizing properties : The substance or mixture is not classified as oxidizing.
Molecular weight : No data available
Particle size : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions
   Flammable liquid and vapor.
   Vapors may form explosive mixture with air.
   Can react with strong oxidizing agents.
Conditions to avoid : Heat, flames and sparks.
Incompatible materials : Oxidizing agents
Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Ingestion
Eye contact
Acute toxicity
Toxic if swallowed or in contact with skin.
### Harmful if inhaled.

**Product:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute oral toxicity</th>
<th>Acute inhalation toxicity</th>
<th>Acute dermal toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aromatic:</td>
<td>LD50 (Rat): &gt; 5,000 mg/kg</td>
<td>LC50 (Rat): &gt; 5.61 mg/l (Exposure time: 4 h, Test atmosphere: vapor)</td>
<td>LD50 (Rabbit): &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>Ethion</td>
<td>LD50 (Rat): 13 mg/kg</td>
<td>LC50 (Rat): 0.450 mg/l (Exposure time: 4 h, Test atmosphere: dust/mist)</td>
<td>LD50 (Rat): 62 mg/kg</td>
</tr>
<tr>
<td>Chlorpyrifos</td>
<td>LD50 (Rat, female): 68 mg/kg</td>
<td>LD50 (Rat, females): 1,250 mg/kg</td>
<td></td>
</tr>
<tr>
<td>2-Methyl-1-propanol</td>
<td>LD50 (Rat, female): 3,350 mg/kg (Method: OECD Test Guideline 401)</td>
<td>LC50 (Rat): &gt; 18.18 mg/l (Exposure time: 6 h, Test atmosphere: vapor)</td>
<td>LD50 (Rabbit, female): 2,460 mg/kg (Method: OECD Test Guideline 402)</td>
</tr>
</tbody>
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(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:

- **Acute oral toxicity**: LD50 (Rat): 57 mg/kg
  Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)

- **Acute inhalation toxicity**: LC50 (Rat): > 1.16 - 1.21 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist

- **Acute dermal toxicity**: LD50 (Rat): > 2,000 mg/kg

Hydrocarbons, C10, aromatics, <1% naphthalene:

- **Acute oral toxicity**: LD50 (Rat): > 5,000 mg/kg
  Method: OECD Test Guideline 420
  Remarks: Based on data from similar materials

- **Acute inhalation toxicity**: LC50 (Rat): > 4.778 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
  Method: OECD Test Guideline 403
  Remarks: Based on data from similar materials

- **Acute dermal toxicity**: LD50 (Rabbit): > 2,000 mg/kg
  Method: OECD Test Guideline 402
  Assessment: The substance or mixture has no acute dermal toxicity
  Remarks: Based on data from similar materials

2,6-Di-tert-butyl-p-cresol:

- **Acute oral toxicity**: LD50 (Rat): > 6,000 mg/kg
  Method: OECD Test Guideline 401

- **Acute dermal toxicity**: LD50 (Rat): > 2,000 mg/kg
  Method: OECD Test Guideline 402
  Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation
Causes skin irritation.

Components:

Solvent naphtha (petroleum), light aromatic:

- **Species**: Rabbit
- **Method**: OECD Test Guideline 404
- **Result**: Skin irritation

Ethion:

- **Species**: Rabbit
- **Result**: Mild skin irritation
### Chlorpyrifos:
- **Species**: Rabbit
- **Method**: OECD Test Guideline 404
- **Result**: No skin irritation

### 2-Methyl-1-propanol:
- **Species**: Rabbit
- **Method**: OECD Test Guideline 404
- **Result**: Skin irritation

### (S)-α-Cyano-3-phenoxycarbonyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropane-3-carboxylate:
- **Species**: Rabbit
- **Result**: Skin irritation

### Hydrocarbons, C10, aromatics, <1% naphthalene:
- **Assessment**: Repeated exposure may cause skin dryness or cracking.

### 2,6-Di-tert-butyl-p-cresol:
- **Species**: Rabbit
- **Method**: OECD Test Guideline 404
- **Result**: No skin irritation
- **Remarks**: Based on data from similar materials

### Serious eye damage/eye irritation
Causes serious eye damage.

### Components:

#### Solvent naphtha (petroleum), light aromatic:
- **Species**: Rabbit
- **Method**: OECD Test Guideline 405
- **Result**: No eye irritation

#### Ethion:
- **Result**: No eye irritation

#### Chlorpyrifos:
- **Species**: Rabbit
- **Result**: No eye irritation
- **Method**: OECD Test Guideline 405

#### 2-Methyl-1-propanol:
- **Species**: Rabbit
- **Result**: Irreversible effects on the eye
Method: OECD Test Guideline 405

(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:

Species: Rabbit
Result: No eye irritation

Hydrocarbons, C10, aromatics, <1% naphthalene:

Species: Rabbit
Result: No eye irritation
Remarks: Based on data from similar materials

2,6-Di-tert-butyl-p-cresol:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
Remarks: Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Components:

Solvent naphtha (petroleum), light aromatic:

Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

Ethion:

Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

Chlorpyrifos:

Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

2-Methyl-1-propanol:

Test Type: Buehler Test
### SAFETY DATA SHEET

**according to the Hazardous Products Regulations**

**Ethion / Chlorpyrifos / Alpha-Cypermethrin**

**Formulation**

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#### Routes of exposure
- **Species**: Guinea pig
- **Method**: OECD Test Guideline 406
- **Result**: negative
- **Remarks**: Based on data from similar materials

**Ethion**:

#### (S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:
- **Test Type**: Maximization Test
- **Routes of exposure**: Skin contact
- **Species**: Guinea pig
- **Result**: negative

#### Hydrocarbons, C10, aromatics, <1% naphthalene:
- **Test Type**: Maximization Test
- **Routes of exposure**: Skin contact
- **Species**: Guinea pig
- **Result**: negative
- **Remarks**: Based on data from similar materials

#### 2,6-Di-tert-butyl-p-cresol:
- **Test Type**: Human repeat insult patch test (HRIPT)
- **Routes of exposure**: Skin contact
- **Species**: Humans
- **Result**: negative

### Germ cell mutagenicity

May cause genetic defects.

### Components:

**Solvent naphtha (petroleum), light aromatic:**
- **Genotoxicity in vitro**:
  - **Test Type**: Bacterial reverse mutation assay (AMES)
  - **Result**: negative

  **Test Type**: In vitro mammalian cell gene mutation test
  **Result**: positive

- **Genotoxicity in vivo**:
  - **Test Type**: Sister chromatid exchange analysis in spermato- gonia
  - **Species**: Mouse
  - **Application Route**: Intraperitoneal injection
  - **Result**: positive

- **Germ cell mutagenicity - Assessment**:
  - Positive result(s) from in vivo heritable germ cell mutagenicity tests in mammals
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Result: negative
- Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
  Result: negative
- Test Type: In vitro sister chromatid exchange assay in mammalian cells
  Result: negative
- Test Type: In vitro micronucleus test
  Result: positive

Genotoxicity in vivo:
- Test Type: Chromosomal aberration
  Species: Rat
  Result: negative

Germ cell mutagenicity - Assessment:
- Weight of evidence does not support classification as a germ cell mutagen.

Chlorpyrifos:
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Method: OECD Test Guideline 471
  Result: negative
- Test Type: In vitro mammalian cell gene mutation test
  Method: OECD Test Guideline 476
  Result: negative
- Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
  Result: negative
- Test Type: Chromosome aberration test in vitro
  Result: positive

Genotoxicity in vivo:
- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
  Species: Mouse
  Application Route: Ingestion
  Method: OECD Test Guideline 474
  Result: negative

2-Methyl-1-propanol:
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
  Result: negative
Test Type: In vitro mammalian cell gene mutation test
Result: negative

Test Type: in vitro micronucleus test
Result: negative

Genotoxicity in vivo:
Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

(S)-α-Cyano-3-phenoxycyanovinyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:

Genotoxicity in vitro:
Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo:
Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 475
Result: negative

Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Rat
Application Route: Ingestion
Result: negative

Hydrocarbons, C10, aromatics, <1% naphthalene:

Genotoxicity in vitro:
Type: In vitro sister chromatid exchange assay in mammalian cells
SAFETY DATA SHEET
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Formulation

Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo:
- Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
- Species: Rat
- Application Route: inhalation (vapor)
- Result: negative
- Remarks: Based on data from similar materials

2,6-Di-tert-butyl-p-cresol:
- Genotoxicity in vitro:
  - Test Type: Bacterial reverse mutation assay (AMES)
  - Result: negative
- Test Type: In vitro mammalian cell gene mutation test
  - Result: negative
- Test Type: Chromosome aberration test in vitro
  - Result: negative

- Genotoxicity in vivo:
  - Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
  - Species: Rat
  - Application Route: Ingestion
  - Result: negative

Carcinogenicity
May cause cancer.

Components:
Solvent naphtha (petroleum), light aromatic:
- Species: Mouse
- Application Route: Skin contact
- Exposure time: 2 Years
- Result: positive

Carcinogenicity - Assessment:
- Sufficient evidence of carcinogenicity in animal experiments

Ethion:
- Species: Rat
- Application Route: Ingestion
- Exposure time: 18 Months
- Result: negative

- Species: Mouse
- Application Route: Ingestion
- Exposure time: 24 Months
- Result: negative
SAFETY DATA SHEET
according to the Hazardous Products Regulations

Ethion / Chlorpyrifos / Alpha-Cypermethrin
Formulation

Version 7.0 Revision Date: 09/30/2023 SDS Number: 934967-00016 Date of last issue: 04/04/2023 Date of first issue: 10/12/2016

Chlorpyrifos:
Species: Rat
Application Route: Ingestion
Exposure time: 2 Years
Result: negative

(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:
Species: Rat
Application Route: Ingestion
Exposure time: 2 Years
Result: negative

2,6-Di-tert-butyl-p-cresol:
Species: Rat
Application Route: Ingestion
Exposure time: 22 Months
Result: negative

Reproductive toxicity
May damage the unborn child.

Components:

Solvent naphtha (petroleum), light aromatic:
Effects on fertility:
Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Effects on fetal development:
Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Ethion:
Effects on fertility:
Test Type: Three-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on fetal development:
Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative

Chlorpyrifos:
Effects on fertility:
Test Type: Two-generation reproduction toxicity study

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<table>
<thead>
<tr>
<th>Compound</th>
<th>Effects on Fertility</th>
<th>Application Route</th>
<th>Result</th>
<th>Effects on Fetal Development</th>
<th>Application Route</th>
<th>Result</th>
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<tbody>
<tr>
<td>Ethion / Chlorpyrifos / Alpha-Cypermethrin Formulation</td>
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<tr>
<td>Species: Rat Application Route: Ingestion Result: negative</td>
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<tr>
<td>Effects on Fetal Development: Test Type: Embryo-fetal development Species: Rat Application Route: Ingestion Result: positive</td>
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<tr>
<td>Reproductive Toxicity - Assessment: Clear evidence of adverse effects on development, based on animal experiments.</td>
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<td>2-Methyl-1-propanol:</td>
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<tr>
<td>Effects on Fertility: Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Inhalation (vapor) Method: OPPTS 870.3800 Result: negative</td>
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<tr>
<td>Effects on Fetal Development: Test Type: Embryo-fetal development Species: Rat Application Route: Inhalation (vapor) Method: OECD Test Guideline 414 Result: negative</td>
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<tr>
<td>Effects on Fetal Development: Test Type: Embryo-fetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative</td>
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<tr>
<td>Hydrocarbons, C10, aromatics, &lt;1% naphthalene:</td>
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<tr>
<td>Effects on Fertility: Test Type: Three-generation reproduction toxicity study Species: Rat Application Route: Inhalation (vapor) Result: negative Remarks: Based on data from similar materials</td>
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<td>Effects on Fetal Development: Test Type: Embryo-fetal development Species: Rat Application Route: Ingestion Result: negative Remarks: Based on data from similar materials</td>
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</tbody>
</table>
2,6-Di-tert-butyl-p-cresol:

Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on fetal development: Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative

STOT-single exposure
May cause drowsiness or dizziness.
Causes damage to organs (Central nervous system, Nervous system).

Components:

Solvent naphtha (petroleum), light aromatic:
Assessment: May cause drowsiness or dizziness.

Ethion:
Assessment: Causes damage to organs.

Chlorpyrifos:
Target Organs: Nervous system
Assessment: Causes damage to organs.

2-Methyl-1-propanol:
Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:
Assessment: May cause respiratory irritation.
Remarks: Based on national or regional regulation.

Hydrocarbons, C10, aromatics, <1% naphthalene:
Assessment: May cause drowsiness or dizziness.
Remarks: Based on data from similar materials

STOT-repeated exposure
Causes damage to organs (Central nervous system) through prolonged or repeated exposure.
**Components:**

**Ethion:**
- **Target Organs**
- **Assessment**: Central nervous system
- Causes damage to organs through prolonged or repeated exposure.

**(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:**
- **Routes of exposure**: Ingestion
- **Target Organs**: Central nervous system
- **Assessment**: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

**2,6-Di-tert-butyl-p-cresol:**
- **Assessment**: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

**Repeated dose toxicity**

**Components:**

**Solvent naphtha (petroleum), light aromatic:**
- **Species**: Rat
- **LOAEL**: 500 mg/kg
- **Application Route**: Ingestion
- **Exposure time**: 28 Days

**Ethion:**
- **Species**: Dog
- **NOAEL**: 0.05 mg/kg
- **Application Route**: Ingestion
- **Exposure time**: 90 Days

**Chlorpyrifos:**
- **Species**: Rat
- **NOAEL**: 0.1 mg/kg
- **LOAEL**: 1 mg/kg
- **Application Route**: Ingestion
- **Exposure time**: 13 Weeks

**Species**: Rat
- **NOAEL**: > 0.000296 mg/l
- **Application Route**: Inhalation (vapor)
- **Exposure time**: 13 Weeks

**Species**: Rat
- **NOAEL**: > 5 mg/kg
- **Application Route**: Skin contact
## Exposure time

<table>
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<tr>
<th>2-Methyl-1-propanol:</th>
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<tr>
<td>Species              : Rat</td>
</tr>
<tr>
<td>NOAEL                : &gt; 1,450 mg/kg</td>
</tr>
<tr>
<td>Application Route    : Ingestion</td>
</tr>
<tr>
<td>Exposure time        : 90 Days</td>
</tr>
<tr>
<td>Method               : OECD Test Guideline 408</td>
</tr>
</tbody>
</table>

| Species              : Rat |
| NOAEL                : >= 7.5 mg/l |
| Application Route    : inhalation (vapor) |
| Exposure time        : 17 Weeks |

## (S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:

| Species              : Dog |
| NOAEL                : 3.5 mg/kg |
| LOAEL                : 13.3 mg/kg |
| Application Route    : Ingestion |
| Exposure time        : 90 Days |

## Hydrocarbons, C10, aromatics, <1% naphthalene:

| Species              : Rat |
| NOAEL                : 300 mg/kg |
| Application Route    : Ingestion |
| Exposure time        : 13 Weeks |
| Remarks              : Based on data from similar materials |

## 2,6-Di-tert-butyl-p-cresol:

| Species              : Rat |
| NOAEL                : 25 mg/kg |
| Application Route    : Ingestion |
| Exposure time        : 22 Months |

### Aspiration toxicity

May be fatal if swallowed and enters airways.

### Product:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

### Components:

**Solvent naphtha (petroleum), light aromatic:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.
2-Methyl-1-propanol:
The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

Hydrocarbons, C10, aromatics, <1% naphthalene:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Experience with human exposure

**Components:**

**Ethion:**
- **Ingestion:** Symptoms: Blurred vision, Dizziness, Headache

**SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity

**Components:**

**Solvent naphtha (petroleum), light aromatic:**
- **Toxicity to fish:** LC50 (Pimephales promelas (fathead minnow)): 8.2 mg/l
  Exposure time: 96 h
  Test substance: Water Accommodated Fraction

- **Toxicity to daphnia and other aquatic invertebrates:** EL50 (Daphnia magna (Water flea)): 4.5 mg/l
  Exposure time: 48 h
  Test substance: Water Accommodated Fraction
  Method: OECD Test Guideline 202

- **Toxicity to algae/aquatic plants:** EL50 (Pseudokirchneriella subcapitata (microalgae)): 3.1 mg/l
  Exposure time: 96 h
  Test substance: Water Accommodated Fraction
  Method: OECD Test Guideline 201

  NOELR (Pseudokirchneriella subcapitata (microalgae)): 0.5 mg/l
  Exposure time: 96 h
  Test substance: Water Accommodated Fraction
  Method: OECD Test Guideline 201

- **Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):** NOELR (Daphnia magna (Water flea)): 2.6 mg/l
  Exposure time: 21 d
  Test substance: Water Accommodated Fraction
  Method: OECD Test Guideline 211

**Ethion:**
- **Toxicity to fish:** LC50 (Oncorhynchus mykiss (rainbow trout)): 0.18 mg/l
  Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50: 0.056 - 7.7 µg/l
Exposure time: 48 h

Chlorpyrifos:
Toxicity to fish: LC50: > 0.1 - 1 µg/l
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50: > 0.01 - 0.1 µg/l
Exposure time: 48 h
Toxicity to algae/aquatic plants: EC50 (Scenedesmus subspicatus): 0.48 mg/l
Exposure time: 96 h
Toxicity to fish (Chronic toxicity): NOEC: 0.3 µg/l
Exposure time: 35 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Mysisopsis bahia (opossum shrimp)): 0.0046 µg/l
Exposure time: 21 d

2-Methyl-1-propanol:
Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 1,430 mg/l
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia pulex (Water flea)): 1,100 mg/l
Exposure time: 48 h
Toxicity to algae/aquatic plants: ErC50 (Pseudokirchneriella subcapitata (green algae)): 1,799 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
NOEC (Pseudokirchneriella subcapitata (green algae)): 117 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 20 mg/l
Exposure time: 21 d
Toxicity to microorganisms: EC50: > 1,000 mg/l
Exposure time: 16 h

(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:
Toxicity to fish: LC50 (Cyprinus carpio (Carp)): 0.00084 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Toxicity to daphnia and other: EC50 (Daphnia magna (Water flea)): 0.0003 mg/l
### Aquatic Invertebrates

| Exposure time: 48 h |
| Method: OECD Test Guideline 202 |

### Toxicity to Algae/Aquatic Plants

| EC50 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l |
| Exposure time: 72 h |
| Method: OECD Test Guideline 201 |

| EC10 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l |
| Exposure time: 72 h |
| Method: OECD Test Guideline 201 |

### Toxicity to Fish (Chronic Toxicity)

| NOEC (Pimephales promelas (fathead minnow)): 0.03 µg/l |
| Exposure time: 34 d |

### Toxicity to Daphnia and Other Aquatic Invertebrates (Chronic Toxicity)

| NOEC (Daphnia magna (Water flea)): 0.03 µg/l |
| Exposure time: 21 d |

### Hydrocarbons, C10, Aromatics, <1% Naphthalene:

### Toxicity to Fish

| LL50 (Onchorhynchus mykiss (rainbow trout)): 2 - 5 mg/l |
| Exposure time: 96 h |
| Test substance: Water Accommodated Fraction |
| Method: OECD Test Guideline 203 |
| Remarks: Based on data from similar materials |

### Toxicity to Daphnia and Other Aquatic Invertebrates

| EL50 (Daphnia magna (Water flea)): 3 - 10 mg/l |
| Exposure time: 48 h |
| Test substance: Water Accommodated Fraction |
| Method: OECD Test Guideline 202 |
| Remarks: Based on data from similar materials |

### Toxicity to Algae/Aquatic Plants

| EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3 mg/l |
| Exposure time: 72 h |
| Test substance: Water Accommodated Fraction |
| Method: OECD Test Guideline 201 |
| Remarks: Based on data from similar materials |

### 2,6-Di-tert-butyl-p-cresol:

### Toxicity to Fish

| LC50 (Danio rerio (zebra fish)): > 0.57 mg/l |
| Exposure time: 96 h |

### Toxicity to Daphnia and Other Aquatic Invertebrates

| EC50 (Daphnia magna (Water flea)): 0.48 mg/l |
| Exposure time: 48 h |
| Method: OECD Test Guideline 202 |

### Toxicity to Algae/Aquatic Plants

| ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.24 mg/l |
| Exposure time: 72 h |

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**SAFETY DATA SHEET**

according to the Hazardous Products Regulations

**Ethion / Chlorpyrifos / Alpha-Cypermethrin**

**Formulation**

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## Ethion / Chlorpyrifos / Alpha-Cypermethrin Formulation

**Method:** OECD Test Guideline 201

**NOEC (Pseudokirchneriella subcapitata (green algae)):** 0.24 mg/l  
**Exposure time:** 72 h  
**Method:** OECD Test Guideline 201

**Toxicity to fish (Chronic toxicity):**  
**NOEC (Oryzias latipes (Japanese medaka)):** 0.053 mg/l  
**Exposure time:** 30 d  
**Method:** OECD Test Guideline 210

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):**  
**NOEC (Daphnia magna (Water flea)):** 0.316 mg/l  
**Exposure time:** 21 d

**Toxicity to microorganisms:**  
**EC50:** > 10,000 mg/l  
**Exposure time:** 3 h  
**Method:** OECD Test Guideline 209

## Persistence and degradability

**Components:**

### Solvent naphtha (petroleum), light aromatic:

**Biodegradability:** Result: Inherently biodegradable.  
**Biodegradation:** 94 %  
**Exposure time:** 25 d

### Ethion:

**Biodegradability:** Result: not rapidly degradable

### Chlorpyrifos:

**Biodegradability:** Result: Not readily biodegradable.  
**Biodegradation:** 22 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301D

### Stability in water:

**Degradation half life (DT50):** > 2 Months

### 2-Methyl-1-propanol:

**Biodegradability:** Result: Readily biodegradable.  
**Biodegradation:** 74 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301D

### (S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:

**Biodegradability:** Result: Not readily biodegradable.  
**Biodegradation:** 0 %  
**Exposure time:** 28 d
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Method: OECD Test Guideline 301B

Hydrocarbons, C10, aromatics, <1% naphthalene:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 49.56 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

2,6-Di-tert-butyl-p-cresol:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 4.5 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Bioaccumulative potential

Components:

Ethion:

Partition coefficient: n-octanol/water : log Pow: 5.07

Chlorpyrifos:

Bioaccumulation : Species: Danio rerio (zebra fish)
Bioconcentration factor (BCF): 6,918
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 5.21
Method: OECD Test Guideline 107

2-Methyl-1-propanol:

Partition coefficient: n-octanol/water : log Pow: 1
Method: OECD Test Guideline 117

(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 910

Partition coefficient: n-octanol/water : log Pow: 6.94

2,6-Di-tert-butyl-p-cresol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 330 - 1,800

Partition coefficient: n-octanol/water : log Pow: 5.1
Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues: Do not dispose of waste into sewer. Dispose of in accordance with local regulations.
- Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- UN number: UN 1992
- Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (Solvent naphtha (petroleum), light aromatic, Ethion)
- Class: 3
- Subsidiary risk: 6.1
- Packing group: III
- Labels: 3 (6.1)
- Environmentally hazardous: yes

IATA-DGR

- UN/ID No.: UN 1992
- Proper shipping name: Flammable liquid, toxic, n.o.s. (Solvent naphtha (petroleum), light aromatic, Ethion)
- Class: 3
- Subsidiary risk: 6.1
- Packing group: III
- Labels: Flammable Liquids, Toxic
- Packing instruction (cargo aircraft): 366
- Packing instruction (passenger aircraft): 355

IMDG-Code

- UN number: UN 1992
- Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (Solvent naphtha (petroleum), light aromatic, Ethion, Chlorpyrifos)
- Class: 3
Subsidiary risk : 6.1
Packing group : III
Labels : 3 (6.1)
EmS Code : F-E, S-D
Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

TDG
UN number : UN 1992
Proper shipping name : FLAMMABLE LIQUID, TOXIC, N.O.S.
(Solvent naphtha (petroleum), light aromatic, Ethion)
Class : 3
Subsidiary risk : 6.1
Packing group : III
Labels : 3 (6.1)
ERG Code : 131
Marine pollutant : yes (Ethion, Chlorpyrifos)
Remarks : Display “inhalation hazard” mark on package in accordance with TDG 4.23.

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

The ingredients of this product are reported in the following inventories:
AICS : not determined
DSL : not determined
IECSC : not determined

SECTION 16. OTHER INFORMATION

Full text of other abbreviations
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
CA BC OEL : Canada. British Columbia OEL
CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
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Version 7.0  Revision Date: 09/30/2023  SDS Number: 934967-00016  Date of last issue: 04/04/2023
Date of first issue: 10/12/2016

ACGIH / TWA : 8-hour, time-weighted average
CA AB OEL / TWA : 8-hour Occupational exposure limit
CA AB OEL / STEL : 15-minute occupational exposure limit
CA BC OEL / TWA : 8-hour time weighted average
CA QC OEL / TWAEV : Time-weighted average exposure value

AICL - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECX - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; ICS0 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System


Revision Date : 09/30/2023
Date format : mm/dd/yyyy

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the
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SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.

CA / Z8