SAFETY DATA SHEET

Ethion / Chlorpyrifos / Alpha-Cypermethrin Formulation

Version 4.4 Revision Date: 10/10/2020 SDS Number: 935022-00009 Date of last issue: 03/23/2020
Date of first issue: 10/12/2016

SECTION 1. IDENTIFICATION

Product name: Ethion / Chlorpyrifos / Alpha-Cypermethrin Formulation

Manufacturer or supplier's details
Company name of supplier: Merck & Co., Inc
Address: 2000 Galloping Hill Road
Kenilworth - New Jersey - U.S.A. 07033
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

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
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)
Specific target organ toxicity - single exposure: Category 3
Specific target organ toxicity - repeated exposure: Category 1 (Central nervous system)
Aspiration hazard: Category 1

GHS label elements
Hazard pictograms: 

- Flammable liquid and vapor icon
- Poison icon
- Smoking prohibited icon
- Eye protection icon
- Long-term exposure hazard icon

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.
- H335 May cause drowsiness or dizziness.
- H340 May cause genetic defects.
- H350 May cause cancer.
- H360FD May damage fertility. May damage the unborn child.
- H370 Causes damage to organs (Central 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, sparks, open flame and hot surfaces. - No smoking.
- P233 Keep container tightly closed.
- P241 Use explosion-proof electrical, ventilating and lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- 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.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aromatic</td>
<td>64742-95-6</td>
<td>&gt;= 50 - &lt; 70</td>
</tr>
<tr>
<td>Ethion</td>
<td>563-12-2</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Chlorpyrifos</td>
<td>2921-88-2</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>2-Methyl-1-propanol</td>
<td>78-83-1</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate</td>
<td>67375-30-8</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Hydrocarbons, C10, aromatics, &lt;1% naphthalene</td>
<td>64742-94-5</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>128-37-0</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

Actual concentration is withheld as a trade secret

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.

Other hazards

Vapors may form explosive mixture with air.
In case of eye contact:
Thoroughly clean shoes before reuse.

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:
In case of eye contact:
May be fatal if swallowed and enters airways.
Causes severe eye damage.
Harmful if inhaled.
May cause dizziness or dizziness.
May cause genetic defects.
May cause cancer.
May damage fertility. 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
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:
In the event of fire, wear self-contained breathing apparatus.
for fire-fighters

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 spillages 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 with 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.

**Conditions for safe storage**
- Keep in properly labeled containers.
- Store locked up.
- Keep tightly closed.
- Keep in a cool, well-ventilated place.
- Store in accordance with the particular national regulations.
- Keep away from heat and sources of ignition.

**Materials to avoid**
- Do not store with the following product types:
  - Strong oxidizing agents
  - 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

### 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>500 ppm 2,000 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 mg/m³ (total hydrocarbon vapor)</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Ethion</td>
<td>563-12-2</td>
<td>TWA (Inhalable fraction and vapor)</td>
<td>0.05 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.4 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Chlorpyrifos</td>
<td>2921-88-2</td>
<td>TWA (Inhalable fraction and vapor)</td>
<td>0.1 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>0.6 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>2-Methyl-1-propanol</td>
<td>78-83-1</td>
<td>TWA</td>
<td>50 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>50 ppm 150 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm 300 mg/m³</td>
<td>OSHA Z-1</td>
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<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>128-37-0</td>
<td>TWA (Inhalable fraction and vapor)</td>
<td>2 mg/m³</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>
Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</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>Chlorpyrifos</td>
<td>2921-88-2</td>
<td>Acetylcholin esterase activity</td>
<td>In red blood cells</td>
<td>End of shift</td>
<td>70 % of an individual's baseline</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Butyrylcholin esterase activity</td>
<td>In serum or plasma</td>
<td>End of shift</td>
<td>60 % of an individual's baseline</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

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: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material: 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:
Hygiene measures

- 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).
- 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>
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<tr>
<td>Odor Threshold</td>
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<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>109 °F / 43 °C</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>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.96 - 1.02</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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:
Acute oral toxicity: Acute toxicity estimate: 70.2 mg/kg
Method: Calculation method

Acute inhalation toxicity: Acute toxicity estimate: 1.64 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: 371.69 mg/kg
Components:

Solvent naphtha (petroleum), light aromatic:
Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity : LC50 (Rat): > 5.61 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Ethion:
Acute oral toxicity : LD50 (Rat): 13 mg/kg
Acute inhalation toxicity : LC50 (Rat): 0.450 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Acute dermal toxicity : LD50 (Rat): 62 mg/kg

Chlorpyrifos:
Acute oral toxicity : LD50 (Rat): 82 mg/kg
Acute inhalation toxicity : LC50 (Rat): 0.385 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Acute dermal toxicity : LD50 (Rabbit): 1,250 - 2,000 mg/kg

2-Methyl-1-propanol:
Acute oral toxicity : LD50 (Rat): 3,350 mg/kg
Method: OECD Test Guideline 401
Acute inhalation toxicity : LC50 (Rat): > 24.6 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Acute dermal toxicity : LD50 (Rabbit): 2,460 mg/kg
Method: OECD Test Guideline 402

(S)-α-Cyano-3-phenoxoxyzl (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 (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

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
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<table>
<thead>
<tr>
<th>Method</th>
<th>OECD Test Guideline 404</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>Skin irritation</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Species</th>
<th>Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>Skin irritation</td>
</tr>
</tbody>
</table>

Hydrocarbons, C10, aromatics, <1% naphthalene:

| Assessment                           | Repeated exposure may cause skin dryness or cracking. |

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

<table>
<thead>
<tr>
<th>Species</th>
<th>Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method</td>
<td>OECD Test Guideline 404</td>
</tr>
<tr>
<td>Result</td>
<td>No skin irritation</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

Solvent naphtha (petroleum), light aromatic:

<table>
<thead>
<tr>
<th>Species</th>
<th>Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>No eye irritation</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 405</td>
</tr>
</tbody>
</table>

Ethion:

| Result | No eye irritation |

Chlorpyrifos:

<table>
<thead>
<tr>
<th>Species</th>
<th>Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>No eye irritation</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 405</td>
</tr>
</tbody>
</table>

2-Methyl-1-propanol:

<table>
<thead>
<tr>
<th>Species</th>
<th>Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>Irreversible effects on the eye</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 405</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Species</th>
<th>Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>No eye irritation</td>
</tr>
</tbody>
</table>

Hydrocarbons, C10, aromatics, <1% naphthalene:

<table>
<thead>
<tr>
<th>Species</th>
<th>Rabbit</th>
</tr>
</thead>
</table>
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:
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

2-Methyl-1-propanol:
Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative
Remarks: Based on data from similar materials

(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
Method: OECD Test Guideline 406
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 spermatogonia
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

Ethion:
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

Test Type: In vivo micronucleus test
Species: Mouse
Result: positive

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)
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: positive

Genotoxicity in vivo : Test Type: In vivo mammalian alkaline comet assay
Species: Rat
Result: positive

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Mouse
Result: negative

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

**2-Methyl-1-propanol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

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

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

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

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

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

Genotoxicity in vivo

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

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

Test 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

: Test Type: In vitro sister chromatid exchange assay in mammalian cells
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

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

Species: Dog
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

IARC  No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA  No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

NTP  No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
May damage fertility. 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: Fertility
Species: Mouse
Application Route: Ingestion
Result: positive

Effects on fetal development : Test Type: Embryo-fetal development
Species: Mouse
Application Route: Intraperitoneal injection
Reproductive toxicity - Assessment:

- Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.
- Clear evidence of adverse effects on development, based on animal experiments.

### 2-Methyl-1-propanol:

#### Effects on fertility:
- Test Type: Two-generation reproduction toxicity study
- Species: Rat
- Application Route: inhalation (vapor)
- Method: OPPTS 870.3800
- Result: negative

#### Effects on fetal development:
- Test Type: Embryo-fetal development
- Species: Rat
- Application Route: inhalation (vapor)
- Method: OECD Test Guideline 414
- Result: negative

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

#### 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
- Method: OECD Test Guideline 414
- Result: negative

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

#### 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

#### Effects on fetal development:
- Test Type: Embryo-fetal development
- Species: Rat
- Application Route: Ingestion
- Result: negative
- Remarks: Based on data from similar materials

### 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).

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

Ethion:
Assessment: Causes damage to organs.

Chlorpyrifos:
Target Organs: Central 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 harmonised classification in EU regulation 1272/2008, Annex VI

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: Central nervous system
Assessment: Causes damage to organs through prolonged or repeated exposure.

Chlorpyrifos:
Target Organs: Central nervous system
Assessment: 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
- LOAEL: 1 mg/kg
- Application Route: Ingestion
- Exposure time: 13 Weeks

2-Methyl-1-propanol:
- Species: Rat
- NOAEL: > 1,450 mg/kg
- Application Route: Ingestion
- Exposure time: 90 Days
- Method: OECD Test Guideline 408

(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

**Chlorpyrifos:**
Inhalation : Symptoms: Headache, Nausea, Vomiting
Ingestion : Symptoms: Cyanosis, Diarrhea
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 (Menidia menidia (Atlantic silverside)): 0.53 µg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: LC50 (Daphnia sp. (Water flea)): 0.035 µg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants: EC50 (Skeletonema costatum (marine diatom)): 298 µg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity): NOEC (Pimephales promelas (fathead minnow)): 0.003 mg/l
Exposure time: 7 d
SAFETY DATA SHEET

Ethion / Chlorpyrifos / Alpha-Cypermethrin
Formulation

Version 4.4 Revision Date: 10/10/2020 SDS Number: 935022-00009 Date of last issue: 03/23/2020
Date of first issue: 10/12/2016

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

(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 aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0003 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (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
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 rapidly degradable

2-Methyl-1-propanol:
Biodegradability : Result: Readily biodegradable.  
Biodegradation: 70 - 80 %  
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  
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: Pimephales promelas (fathead minnow)  
Bioconcentration factor (BCF): 23,000

Partition coefficient: n-octanol/water : log Pow: 5

2-Methyl-1-propanol:
Partition coefficient: n-octanol/water : log Pow: 1
**SAFETY DATA SHEET**

**Ethion / Chlorpyrifos / Alpha-Cypermethrin**

**Formulation**

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<tr>
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<th>Revision Date:</th>
<th>SDS Number:</th>
<th>Date of last issue:</th>
<th>Date of first issue:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4</td>
<td>10/10/2020</td>
<td>935022-00009</td>
<td>03/23/2020</td>
<td>10/12/2016</td>
</tr>
</tbody>
</table>

(S)-α-Cyano-3-phenoxysterzyl (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**: 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)

**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
SAFETY DATA SHEET

Ethion / Chlorpyrifos / Alpha-Cypermethrin Formulation

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>SDS Number</th>
<th>Date of last issue</th>
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<td>10/10/2020</td>
<td>935022-00009</td>
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<td>10/12/2016</td>
</tr>
</tbody>
</table>

**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**

**49 CFR**
- UN/ID/NA number: UN 1992
- Proper shipping name: Flammable liquids, toxic, n.o.s. (Solvent naphtha (petroleum), light aromatic, Ethion)
- Class: 3
- Subsidiary risk: 6.1
- Packing group: III
- Labels: FLAMMABLE LIQUID, TOXIC
- ERG Code: 131
- Marine pollutant: yes (Ethion, Chlorpyrifos)

**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**

**CERCLA Reportable Quantity**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
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</thead>
<tbody>
<tr>
<td>Chlorpyrifos</td>
<td>2921-88-2</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Ethion</td>
<td>563-12-2</td>
<td>10</td>
<td>62</td>
</tr>
<tr>
<td>2-Methyl-1-propanol</td>
<td>78-83-1</td>
<td>5000</td>
<td>62500</td>
</tr>
</tbody>
</table>

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethion</td>
<td>563-12-2</td>
<td>10</td>
<td>62</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

Ethion / Chlorpyrifos / Alpha-Cypermethrin Formulation

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SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component TPQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethion</td>
<td>563-12-2</td>
<td>1000</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazards:
- Flammable (gases, aerosols, liquids, or solids)
- Acute toxicity (any route of exposure)
- Germ cell mutagenicity
- Carcinogenicity
- Reproductive toxicity
- Specific target organ toxicity (single or repeated exposure)
- Aspiration hazard
- Skin corrosion or irritation
- Serious eye damage or eye irritation

SARA 313:
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know
Solvent naphtha (petroleum), light aromatic 64742-95-6
Ethion 563-12-2
Chlorpyrifos 2921-88-2
2-Methyl-1-propanol 78-83-1
Polyethylene-polypropylene Glycol Monobutyl Ether 9038-95-3
(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate 67375-30-8
Hydrocarbons, C10, aromatics, <1% naphthalene 64742-94-5
2,6-Di-tert-butyl-p-cresol 128-37-0

California Prop. 65
WARNING: This product can expose you to chemicals including Chlorpyrifos, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances
Ethion 563-12-2
Chlorpyrifos 2921-88-2
2-Methyl-1-propanol 78-83-1
2,6-Di-tert-butyl-p-cresol 128-37-0

California Permissible Exposure Limits for Chemical Contaminants
Ethion 563-12-2
Chlorpyrifos 2921-88-2
2-Methyl-1-propanol 78-83-1
2,6-Di-tert-butyl-p-cresol 128-37-0

The ingredients of this product are reported in the following inventories:
- AICS: not determined
- DSL: not determined
- IECSC: not determined
SECTİON 16. OTHER INFORMATION

Further information

NFPA 704:

HMIS® IV:

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<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
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HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
NIOSH REL : USA. NIOSH Recommended Exposure Limits
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA : 8-hour, time-weighted average
NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST : STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime

Revision Date: 10/10/2020

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 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.

US / Z8