SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Ethion / Chlorpyrifos / Alpha-Cypermethrin Formulation

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

1.1 Product identifier
Trade name : Ethion / Chlorpyrifos / Alpha-Cypermethrin Formulation

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use of the Substance/Mixture : Veterinary product

1.3 Details of the supplier of the safety data sheet
Company : MSD
Shotton Lane
NE23 3JU Cramlington NU - Great Britain

Telephone : 44 1 670 59 30 00
Telefax : 908-735-1496
E-mail address of person responsible for the SDS : EHSDATASTEWARD@msd.com

1.4 Emergency telephone number
1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
- Flammable liquids, Category 3
  - H226: Flammable liquid and vapour.
- Acute toxicity, Category 3
  - H301: Toxic if swallowed.
- Acute toxicity, Category 4
  - H332: Harmful if inhaled.
- Acute toxicity, Category 3
  - H311: Toxic in contact with skin.
- Skin irritation, Category 2
  - H315: Causes skin irritation.
- Serious eye damage, Category 1
  - H318: Causes serious eye damage.
- Germ cell mutagenicity, Category 1B
  - H340: May cause genetic defects.
- Carcinogenicity, Category 1B
  - H350: May cause cancer.
- Reproductive toxicity, Category 1B
  - H360FD: May damage fertility. May damage the unborn child.
- Specific target organ toxicity - single exposure, Category 1
  - H370: Causes damage to organs.
- Specific target organ toxicity - single exposure, Category 3
  - H336: May cause drowsiness or dizziness.
- Specific target organ toxicity - repeated exposure, Category 1
  - H372: Causes damage to organs through prolonged or repeated exposure.
- Aspiration hazard, Category 1
  - H304: May be fatal if swallowed and enters airways.
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Date of first issue: 12.10.2016

Short-term (acute) aquatic hazard, Category 1
Long-term (chronic) aquatic hazard, Category 1

H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :  

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
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.
H360FD May damage fertility. May damage the unborn child.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : Prevention:
P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
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/ doctor.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P391 Collect spillage.

Hazardous components which must be listed on the label:
Solvent naphtha (petroleum), light aromatic
Ethion
Chlorpyrifos
2-Methyl-1-propanol

Additional Labelling
Restricted to professional users.

2.3 Other hazards
Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aromatic</td>
<td>64742-95-6; 265-199-0; 649-356-00-4</td>
<td>Flam. Liq.3; H226 Skin Irrit.2; H315 Muta.1B; H340 Carc.1B; H350 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic2; H411</td>
<td>&gt;= 50 - &lt; 70</td>
</tr>
<tr>
<td>Ethion</td>
<td>563-12-2; 209-242-3; 015-047-00-2</td>
<td>Acute Tox.2; H300 Acute Tox.2; H330 Acute Tox.2; H310 STOT SE1; H370 STOT RE1; H372 Aquatic Acute1; H400 Aquatic Chronic1; H410</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Chlorpyrifos</td>
<td>2921-88-2; 220-864-4; 015-084-00-4</td>
<td>Acute Tox.3; H301 Acute Tox.2; H330 Acute Tox.4; H312 Repr.1B; H360FD STOT SE1; H370 STOT RE1; H372 Aquatic Acute1; H400 Aquatic Chronic1; H410</td>
<td>&gt;= 2.5 - &lt; 10</td>
</tr>
</tbody>
</table>
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M-Factor (Chronic aquatic toxicity): 10.000
M-Factor (Acute aquatic toxicity): 1.000
M-Factor (Chronic aquatic toxicity): 1.000
M-Factor (Acute aquatic toxicity): 1.000
M-Factor (Chronic aquatic toxicity): 1.000
M-Factor (Acute aquatic toxicity): 1
M-Factor (Chronic aquatic toxicity): 1

SECTION 4: First aid measures

4.1 Description of 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.

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).

If inhaled: If inhaled, remove to fresh air.

For explanation of abbreviations see section 16.
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 centre immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Risks:
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 fertility. May damage the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment:
Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:
Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media:
High volume water jet
5.2 Special hazards arising from the substance or mixture

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.
- Vapours may form explosive mixtures with air.
- Exposure to combustion products may be a hazard to health.

Hazardous combustion products:
- Carbon oxides
- Sulphur oxides
- Oxides of phosphorus
- Chlorine compounds
- Nitrogen oxides (NOx)

5.3 Advice for firefighters

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

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:
- Remove all sources of ignition.
- Use personal protective equipment.
- Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions

Environmental precautions:
- Discharge into the environment must be avoided.
- 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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up:
- Non-sparking tools should be used.
- Soak up with inert absorbent material.
- Suppress (knock down) gases/vapours/mists with a water spray jet.
- For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked 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.

6.4 Reference to other sections
See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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

Local/Total ventilation: If sufficient ventilation is unavailable, use with local exhaust ventilation. If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Advice on safe handling: Do not get on skin or clothing. Do not breathe vapours or spray mist. Do not swallow. Do not get in eyes. 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 and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment.

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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep in properly labelled 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.

Advice on common storage: Do not store with the following product types: Strong oxidizing agents Organic peroxides Flammable solids
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Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures, which in contact with water, emit flammable gases
Explosives
Gases

7.3 Specific end use(s)
Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aromatic</td>
<td>64742-95-6</td>
<td>TWA</td>
<td>25 ppm 120 mg/m³</td>
<td>FOR-2011-12-06-1358</td>
</tr>
<tr>
<td>Chlorpyrifos</td>
<td>2921-88-2</td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>FOR-2011-12-06-1358</td>
</tr>
</tbody>
</table>

Further information: Chemicals that can be absorbed through the skin.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-1-propanol</td>
<td>78-83-1</td>
<td>T</td>
<td>25 ppm 75 mg/m³</td>
<td>FOR-2011-12-06-1358</td>
</tr>
</tbody>
</table>

Further information: Chemicals that can be absorbed through the skin., Ceiling value is an instantaneous value which indicates the maximum concentration of a chemical in the breathing zone that should not be exceeded.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbons, C10, aromatics, &lt;1% naphthalene</td>
<td>64742-94-5</td>
<td>TWA</td>
<td>25 ppm 120 mg/m³</td>
<td>FOR-2011-12-06-1358</td>
</tr>
</tbody>
</table>

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-1-propanol</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>310 mg/m³</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>55 mg/m³</td>
<td></td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>3,5 mg/m³</td>
</tr>
<tr>
<td>Workers</td>
<td>Dermal</td>
<td>Long-term systemic effects</td>
<td>0,5 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>0,86 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Dermal</td>
<td>Long-term systemic effects</td>
<td>0,25 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic</td>
<td>0,25 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methyl-1-propanol</td>
<td>Fresh water</td>
<td>0.4 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.04 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>11 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>10 mg/l</td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td>1.56 mg/kg dry weight (d.w.)</td>
<td></td>
</tr>
<tr>
<td>Marine sediment</td>
<td>0.156 mg/kg dry weight (d.w.)</td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td>0.076 mg/kg dry weight (d.w.)</td>
<td></td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>Fresh water</td>
<td>0.199 µg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.02 µg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.02 µg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>0.17 mg/l</td>
</tr>
<tr>
<td>Fresh water sediment</td>
<td>0.0996 mg/kg dry weight (d.w.)</td>
<td></td>
</tr>
<tr>
<td>Marine sediment</td>
<td>0.00996 mg/kg dry weight (d.w.)</td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td>0.04769 mg/kg dry weight (d.w.)</td>
<td></td>
</tr>
<tr>
<td>Oral (Secondary Poisoning)</td>
<td>8.33 mg/kg food</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Engineering measures
Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Personal protective equipment

Eye protection: Wear the following personal protective equipment:
Chemical resistant goggles must be worn.
If splashes are likely to occur, wear:
Face-shield
Equipment should conform to NS EN 166

Hand protection
Material: Chemical-resistant gloves

Remarks: Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and 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.

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).

Respiratory protection: If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. Equipment should conform to NS EN 14387.

Filter type: Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance**: liquid
- **Colour**: yellow
- **Odour**: strong
- **Odour Threshold**: No data available
- **pH**: No data available
- **Melting point/freezing point**: No data available
- **Initial boiling point and boiling range**: No data available
- **Flash point**: 43 °C
- **Evaporation rate**: No data available
- **Flammability (solid, gas)**: Not applicable
- **Upper explosion limit / Upper flammability limit**: No data available
- **Lower explosion limit / Lower flammability limit**: No data available
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</table>

- **Vapour pressure**: No data available
- **Relative vapour 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
  - **Auto-ignition 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.

### 9.2 Other information

- **Flammability (liquids)**: Not applicable
- **Molecular weight**: No data available
- **Particle size**: No data available

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Not classified as a reactivity hazard.

#### 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

- **Hazardous reactions**: Flammable liquid and vapour. Vapours may form explosive mixture with air. Can react with strong oxidizing agents.

#### 10.4 Conditions to avoid

- **Conditions to avoid**: Heat, flames and sparks.

#### 10.5 Incompatible materials

- **Materials to avoid**: Oxidizing agents
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10.6 Hazardous decomposition products
No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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: 70,32 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: 376,23 mg/kg
  Method: Calculation method

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: vapour
- 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
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<thead>
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</table>

**Acute inhalation toxicity**
- **LC50 (Rat):** 0.385 mg/l  
  Exposure time: 4 h
  Test atmosphere: dust/mist

**Acute dermal toxicity**
- **LD50 (Rat):** 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: vapour

**Acute dermal toxicity**
- **LD50 (Rabbit):** 2.460 mg/kg  
  Method: OECD Test Guideline 402

**Hydrocarbons, C10, aromatics, <1% naphthalene:**
- **Acute oral toxicity**
  - LD50 (Rat): > 6.000 mg/kg  
    Method: OECD Test Guideline 401

**2,6-Di-tert-butyl-p-cresol:**
- **Acute oral toxicity**
  - LD50 (Rat): > 6.000 mg/kg  
    Method: OECD Test Guideline 401

**Assessment:** The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials
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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-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate:
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:
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</tr>
</thead>
</table>

Species: Rabbit  
Method: OECD Test Guideline 405  
Result: No eye irritation

Ethion:  
Result: No eye irritation

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

2-Methyl-1-propanol:  
Species: Rabbit  
Method: OECD Test Guideline 405  
Result: No eye irritation

(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2dimethylcyclopropanecarboxylate:  
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  
Method: OECD Test Guideline 405  
Result: No eye irritation  
Remarks: Based on data from similar materials

Respiratory or skin sensitisation

Skin sensitisation  
Not classified based on available information.

Respiratory sensitisation  
Not classified based on available information.

Components:

Solvent naphtha (petroleum), light aromatic:  
Test Type: Buehler Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Result: negative
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Ethion:
Exposure routes : Skin contact
Species : Guinea pig
Result : negative

Chlorpyrifos:
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative

2-Methyl-1-propanol:
Test Type : Maximisation Test
Exposure routes : 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 : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative

Hydrocarbons, C10, aromatics, <1% naphthalene:
Test Type : Maximisation Test
Exposure routes : 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)
Exposure routes : 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
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Ethion / Chlorpyrifos / Alpha-Cypermethrin
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Genotoxicity in vivo:
- Test Type: In vitro mammalian cell gene mutation test
  Result: positive

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-phenoxybenzyl (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 (vapour)
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
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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

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 (vapour)
Result: negative

Effects on foetal development: Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (vapour)
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**Ethion:**

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

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

**Chlorpyrifos:**

Effects on fertility: Test Type: Fertility
Species: Mouse
Application Route: Ingestion
Result: positive

Effects on foetal development: Test Type: Embryo-foetal development
Species: Mouse
Application Route: Intraperitoneal injection
Result: positive

Reproductive toxicity - Assessment: Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

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

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

Effects on foetal development: Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (vapour)
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 foetal development: Test Type: Embryo-foetal development
Species: Rat
Hydrocarbons, C10, aromatics, <1% naphthalene:
Effects on fertility: Test Type: Three-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Result: negative
Remarks: Based on data from similar materials

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

STOT - single exposure
May cause drowsiness or dizziness.
Causes damage to organs.

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.
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(S)-α-Cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropene carboxylate:
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 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-dimethylcyclopropene carboxylate:
Exposure routes: 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
**ETHION / CHLORPYRIFOS / ALPHA-CYPERMETHRIN**

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**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.
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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, Diarrhoea

SECTION 12: Ecological information

12.1 Toxicity

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
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**Ethion:**

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

- **Toxicity to fish:**
  - LC50 (Onchorhynchus 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

- **M-Factor (Acute aquatic toxicity):**
  - 10.000

- **M-Factor (Chronic aquatic toxicity):**
  - 10.000

**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

- **M-Factor (Acute aquatic toxicity):**
  - 10.000

- **Toxicity to fish (Chronic toxicity):**
  - NOEC: 0.003 mg/l
    - Exposure time: 7 d
    - Species: Pimephales promelas (fathead minnow)

- **M-Factor (Chronic aquatic toxicity):**
  - 10.000

**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
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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):

(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

M-Factor (Acute aquatic toxicity):
1.000

Toxicity to fish (Chronic toxicity):
NOEC: 0.03 µg/l
Exposure time: 34 d
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEC: 0.03 µg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity):
1.000

Hydrocarbons, C10, aromatics, <1% naphthalene:

Toxicity to fish:
LL50 ( Oncorhynchus 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
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<tr>
<td>Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): &gt; 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</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-cresol:</td>
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<tr>
<td>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</td>
</tr>
<tr>
<td>Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): &gt; 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</td>
</tr>
<tr>
<td>M-Factor (Acute aquatic toxicity) : 1</td>
</tr>
<tr>
<td>Toxicity to microorganisms : EC50 : &gt; 10.000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209</td>
</tr>
<tr>
<td>Toxicity to fish (Chronic toxicity) : NOEC: 0.053 mg/l Exposure time: 30 d Species: Oryzias latipes (Japanese medaka) Method: OECD Test Guideline 210</td>
</tr>
<tr>
<td>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.316 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)</td>
</tr>
<tr>
<td>M-Factor (Chronic aquatic toxicity) : 1</td>
</tr>
</tbody>
</table>
12.2 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

12.3 Bioaccumulative potential

**Components:**

**Ethion:**
Partition coefficient: n-octanol/water : log Pow: 5,07
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**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

**(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

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
Not relevant

12.6 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- **Product**: Dispose of in accordance with local regulations.
  According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
  Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

- **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.
14.1 UN number

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<th>ADR</th>
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14.2 UN proper shipping name

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<tr>
<td></td>
<td>FLAMMABLE LIQUID, TOXIC, N.O.S. (Solvent naphtha (petroleum), light aromatic, Ethion)</td>
<td>FLAMMABLE LIQUID, TOXIC, N.O.S. (Solvent naphtha (petroleum), light aromatic, Ethion)</td>
<td>FLAMMABLE LIQUID, TOXIC, N.O.S. (Solvent naphtha (petroleum), light aromatic, Ethion)</td>
<td>FLAMMABLE LIQUID, TOXIC, N.O.S. (Solvent naphtha (petroleum), light aromatic, Ethion, Chlorpyrifos)</td>
<td>Flammable liquid, toxic, n.o.s. (Solvent naphtha (petroleum), light aromatic, Ethion)</td>
</tr>
</tbody>
</table>

14.3 Transport hazard class(es)

<table>
<thead>
<tr>
<th></th>
<th>ADN</th>
<th>ADR</th>
<th>RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
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<tbody>
<tr>
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<td>3</td>
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</table>

14.4 Packing group

<table>
<thead>
<tr>
<th></th>
<th>ADN</th>
<th>ADR</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group</td>
<td>III</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Classification Code</td>
<td>FT1</td>
<td>FT1</td>
<td>FT1</td>
</tr>
<tr>
<td>Hazard Identification Number</td>
<td>36</td>
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<td>36</td>
</tr>
<tr>
<td>Labels</td>
<td>3 (6.1)</td>
<td>3 (6.1)</td>
<td>3 (6.1)</td>
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<tr>
<td>Tunnel restriction code</td>
<td>(D/E)</td>
<td>(D/E)</td>
<td>(D/E)</td>
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</tbody>
</table>
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Classification Code: FT1
Hazard Identification Number: 36
Labels: 3 (6.1)

IMDG
Packing group: III
Labels: 3 (6.1)
EmS Code: F-E, S-D

IATA (Cargo)
Packing instruction (cargo aircraft): 366
Packing instruction (LQ): Y343
Packing group: III
Labels: Flammable Liquids, Toxic

IATA (Passenger)
Packing instruction (passenger aircraft): 355
Packing instruction (LQ): Y343
Packing group: III
Labels: Flammable Liquids, Toxic

14.5 Environmental hazards

ADN
Environmentally hazardous: yes

ADR
Environmentally hazardous: yes

RID
Environmentally hazardous: yes

IMDG
Marine pollutant: yes

14.6 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks: Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)
Conditions of restriction for the following entries should be considered:
Number on list 3
Solvent naphtha (petroleum), light aromatic (Number on list 29, 28)
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REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable
REACH - List of substances subject to authorisation (Annex XIV): Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Ethion


<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quantity 1</th>
<th>Quantity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3</td>
<td>STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE</td>
<td>50 t</td>
<td>200 t</td>
</tr>
<tr>
<td>P5c</td>
<td>FLAMMABLE LIQUIDS</td>
<td>5.000 t</td>
<td>50.000 t</td>
</tr>
<tr>
<td>E1</td>
<td>ENVIRONMENTAL HAZARDS</td>
<td>100 t</td>
<td>200 t</td>
</tr>
<tr>
<td>34</td>
<td>Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams), (d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)</td>
<td>2.500 t</td>
<td>25.000 t</td>
</tr>
</tbody>
</table>

Other regulations:
Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.
Young people under the age of 18 are not allowed to use or be exposed to the product professionally. Young people above the age of 15 are, however, except from this rule if the product is a necessary part of their education.

The components of this product are reported in the following inventories:
AICS: not determined
DSL: not determined
IECSC: not determined
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15.2 Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

Full text of H-statements
H226: Flammable liquid and vapour.
H300: Fatal if swallowed.
H301: Toxic if swallowed.
H304: May be fatal if swallowed and enters airways.
H310: Fatal in contact with skin.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H330: Fatal if inhaled.
H332: Harmful if inhaled.
H335: May cause respiratory irritation.
H336: 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.
H372: Causes damage to organs through prolonged or repeated exposure.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
H411: Toxic to aquatic life with long lasting effects.

Full text of other abbreviations
Acute Tox.: Acute toxicity
Aquatic Acute: Short-term (acute) aquatic hazard
Aquatic Chronic: Long-term (chronic) aquatic hazard
Asp. Tox.: Aspiration hazard
Carc.: Carcinogenicity
Eye Dam.: Serious eye damage
Flam. Liq.: Flammable liquids
Muta.: Germ cell mutagenicity
Repr.: Reproductive toxicity
Skin Irrit.: Skin irritation
STOT RE: Specific target organ toxicity - repeated exposure
STOT SE: Specific target organ toxicity - single exposure
FOR-2011-12-06-1358: Norway. Occupational Exposure limits
FOR-2011-12-06-1358 / TWA: Long term exposure limit
FOR-2011-12-06-1358 / T: Ceiling
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ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; IC50 - 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance 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

Further information

Classification of the mixture:

<table>
<thead>
<tr>
<th>Property</th>
<th>Classification</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 3</td>
<td>H226</td>
<td>Based on product data or assessment</td>
</tr>
<tr>
<td>Acute Tox. 3</td>
<td>H301</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 4</td>
<td>H332</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 3</td>
<td>H311</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>H318</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Muta. 1B</td>
<td>H340</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Carc. 1B</td>
<td>H350</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 1B</td>
<td>H360FD</td>
<td>Calculation method</td>
</tr>
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</tr>
</thead>
</table>

| STOT SE 1 | H370 | Calculation method |
| STOT SE 3 | H336 | Calculation method |
| STOT RE 1 | H372 | Calculation method |
| Asp. Tox. 1 | H304 | Based on product data or assessment |
| Aquatic Acute 1 | H400 | Calculation method |
| Aquatic Chronic 1 | H410 | Calculation method |

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.

NO / EN