SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version 2.7 Revision Date: 2021/04/09 SDS Number: 1204410-00011 Date of last issue: 2020/10/10
Date of first issue: 2017/01/09

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Manufacturer or supplier's details
Company : MSD
Address : No. 485 Jing Tai Road
Pu Tuo District - Shanghai - China 200331
Telephone : +1-908-740-4000
Emergency telephone number : 86-571-87268110
E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use
Recommended use : Veterinary product

2. HAZARDS IDENTIFICATION

Emergency Overview

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>solid</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

Harmful if swallowed. May be harmful in contact with skin. Causes skin and eye irritation. Toxic if inhaled. Causes damage to organs. Very toxic to aquatic life with long lasting effects.

GHS Classification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (Oral)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity (Inhalation)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Acute toxicity (Dermal)</td>
<td>Category 5</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2B</td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure</td>
<td>Category 1</td>
</tr>
<tr>
<td>Short-term (acute) aquatic hazard</td>
<td>Category 1</td>
</tr>
<tr>
<td>Long-term (chronic) aquatic hazard</td>
<td>Category 1</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

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Version 2.7  Revision Date: 2021/04/09  SDS Number: 1204410-00011  Date of last issue: 2020/10/10  Date of first issue: 2017/01/09

GHS label elements
Hazard pictograms:

Signal word: Danger

Hazard statements:
H302 Harmful if swallowed.
H313 May be harmful in contact with skin.
H315 + H320 Causes skin and eye irritation.
H331 Toxic if inhaled.
H370 Causes damage to organs.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:
Prevention:
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
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.
P273 Avoid release to the environment.
P280 Wear protective gloves.

Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Storage:
P405 Store locked up.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.
Physical and chemical hazards
Not classified based on available information.

Health hazards
Harmful if swallowed. Toxic if inhaled. May be harmful in contact with skin. Causes skin irritation. Causes eye irritation. Causes damage to organs.

Environmental hazards
Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Other hazards which do not result in classification
None known.

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>Polyvinyl chloride</td>
<td>9002-86-2</td>
<td>&gt;= 70 - &lt; 90</td>
</tr>
<tr>
<td>Pirimiphos-methyl (ISO)</td>
<td>29232-93-7</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>lambda-cyhalothrin (ISO)</td>
<td>91465-08-6</td>
<td>&gt;= 2.5 - &lt; 10</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>&gt;= 0.1 - &lt; 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

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

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

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

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

If swallowed : If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and : Harmful if swallowed. May be harmful in contact with skin.
5. FIREFIGHTING MEASURES

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

Unsuitable extinguishing media: None known.

Specific hazards during firefighting: Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides
Nitrogen oxides (NOx)
Chlorine compounds
Fluorine compounds

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

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: 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.
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: Sweep up or vacuum up spillage and collect in suitable container for disposal.
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.
7. HANDLING AND STORAGE

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.
Advice on safe handling: Do not get on skin or clothing. Do not breathe dust, fume, gas, mist, vapours or spray. 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. Keep container tightly closed. Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment.
Avoidance of contact: Oxidizing agents

Storage
Conditions for safe storage: 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.
Materials to avoid: Do not store with the following product types: Explosives
Packaging material: Unsuitable material: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components 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>Polyvinyl chloride</td>
<td>9002-86-2</td>
<td>PC-TWA (Total dust)</td>
<td>5 mg/m3</td>
<td>CN OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable particulate matter)</td>
<td>1 mg/m3</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Pirimiphos-methyl (ISO)</td>
<td>29232-93-7</td>
<td>TWA</td>
<td>60 µg/m3 (OEB 3)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Further information: Skin</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>600 µg/100 cm²</td>
<td>Internal</td>
</tr>
<tr>
<td>lambda-cyhalothrin (ISO)</td>
<td>91465-08-6</td>
<td>TWA</td>
<td>5 µg/m3 (OEB 4)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Further information: Skin</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>50 µg/100 cm²</td>
<td>Internal</td>
</tr>
</tbody>
</table>
Titanium dioxide | 13463-67-7 | PC-TWA (Total dust) 8 mg/m$^3$ | CN OEL Further information: G2B - Possibly carcinogenic to humans
| | TWA 10 mg/m$^3$ (Titanium dioxide) | ACGIH

**Engineering measures**: All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices). Minimize open handling.

**Personal protective equipment**

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

**Filter type**: Particulates type

**Eye/face protection**: Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

**Skin and body protection**: Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially contaminated clothing.

**Hand protection**

**Material**: Chemical-resistant gloves

**Remarks**: Consider double gloving.

**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. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**: solid
**SAFETY DATA SHEET**
according to GB/T 16483 and GB/T 17519

**Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation**

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
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<tr>
<td>2.7</td>
<td>2021/04/09</td>
<td>1204410-00011</td>
<td>2020/10/10</td>
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</tbody>
</table>

- Colour: No data available
- Odour: characteristic
- 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: Not applicable
- Evaporation rate: No data available
- Flammability (solid, gas): Not classified as a flammability hazard
- Flammability (liquids): No data available
- Upper explosion limit / Upper flammability limit: No data available
- Lower explosion limit / Lower flammability limit: No data available
- Vapour pressure: No data available
- Relative vapour density: No data available
- Relative density: No data available
- Density: No data available
- Solubility(ies)
  - Water solubility: insoluble
- 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.
- Molecular weight: No data available
10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : Can react with strong oxidizing agents.
Conditions to avoid : None known.
Incompatible materials : Oxidizing agents
Hazardous decomposition products : No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Exposure routes : Skin contact
                  Ingestion
                  Eye contact

Acute toxicity
Harmful if swallowed.
May be harmful in contact with skin.
Toxic if inhaled.

Product:
Acute oral toxicity : Acute toxicity estimate: 654.55 mg/kg
                     Method: Calculation method
Acute inhalation toxicity : Acute toxicity estimate: 0.7505 mg/l
                          Exposure time: 4 h
                          Test atmosphere: dust/mist
                          Method: Calculation method
Acute dermal toxicity : Acute toxicity estimate: 4,964 mg/kg
                        Method: Calculation method

Components:

Pirimiphos-methyl (ISO):
Acute oral toxicity : LD50 (Rat): 1,180 mg/kg
                     LD50 (Rat): 2,400 - 5,976 mg/kg
                     LD50 (Mouse): > 575 mg/kg
                     LD50 (Dog): > 1,500 mg/kg
Acute inhalation toxicity : LC50 (Rat): > 5.04 mg/l
                           Exposure time: 4 h
Acute dermal toxicity : LD50 (Rabbit): 2,000 mg/kg
LD50 (Rat): > 4,592 mg/kg

_lambda-cyhalothrin (ISO):
Acute oral toxicity : LD50 (Rat): 56 - 79 mg/kg
                     : LD50 (Mouse): 20 mg/kg
Acute inhalation toxicity : LC50 (Rat): 0.06 mg/l
                          : Exposure time: 4 h
                          : Test atmosphere: dust/mist
Acute dermal toxicity : LD50 (Rat): 632 - 696 mg/kg
Acute toxicity (other routes of administration) : LD50 (Rat): 250 - 750 mg/kg
                            : Application Route: Intraperitoneal

_Titanium dioxide:
Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity : LC50 (Rat): > 6.82 mg/l
                          : Exposure time: 4 h
                          : Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

_Skin corrosion/irritation_
Causes skin irritation.

**Components:**

**Pirimiphos-methyl (ISO):**
Species : Rabbit
Result : irritating

**lambda-cyhalothrin (ISO):**
Species : Rabbit
Result : No skin irritation

**Titanium dioxide:**
Species : Rabbit
Result : No skin irritation

_Serious eye damage/eye irritation_
Causes eye irritation.
Components:

Pirimiphos-methyl (ISO):
Species : Rabbit
Result : Mild eye irritation

lambda-cyhalothrin (ISO):
Species : Rabbit
Result : Mild eye irritation

Titanium dioxide:
Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitisation
Skin sensitisation
Not classified based on available information.
Respiratory sensitisation
Not classified based on available information.

Components:

Pirimiphos-methyl (ISO):
Test Type : Maximisation Test
Exposure routes : Dermal
Species : Guinea pig
Result : Not a skin sensitizer.

lambda-cyhalothrin (ISO):
Test Type : Magnusson-Kligman-Test
Exposure routes : Dermal
Species : Guinea pig
Result : Not a skin sensitizer.

Titanium dioxide:
Test Type : Local lymph node assay (LLNA)
Exposure routes : Skin contact
Species : Mouse
Result : negative

Germ cell mutagenicity
Not classified based on available information.

Components:

Pirimiphos-methyl (ISO):
Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Result: equivocal

Test Type: sister chromatid exchange assay
Result: positive

Genotoxicity in vivo:
Test Type: Micronucleus test
Species: Mouse
Result: negative

Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Result: negative

**lambda-cyhalothrin (ISO):**

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

Test Type: Chromosomal aberration
Test system: Human lymphocytes
Result: negative

Test Type: unscheduled DNA synthesis assay
Test system: rat hepatocytes
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative

Genotoxicity in vivo:
Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Application Route: Intraperitoneal
Result: negative

**Titanium dioxide:**

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

Genotoxicity in vivo:
Test Type: In vivo micronucleus test
Species: Mouse
Result: negative

**Carcinogenicity**
Not classified based on available information.

**Components:**

**Pirimiphos-methyl (ISO):**
Species: Rat
Application Route: Oral
**Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation**

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
<th>SDS Number:</th>
<th>Date of last issue:</th>
<th>Date of first issue:</th>
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<td>2021/04/09</td>
<td>1204410-00011</td>
<td>2020/10/10</td>
<td>2017/01/09</td>
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</tbody>
</table>

- **Exposure time**: 2 Years
- **Result**: negative
- **Species**: Mouse
- **Application Route**: Oral
- **Exposure time**: 80 weeks
- **Result**: negative

**Carcinogenicity - Assessment**: Animal testing did not show any carcinogenic effects.

**Lambda-cyhalothrin (ISO):**

- **Species**: Mouse
- **Application Route**: oral (feed)
- **Exposure time**: 2 Years
- **Result**: negative
- **Remarks**: Based on data from similar materials

**Species**: Rat
- **Application Route**: oral (feed)
- **Exposure time**: 2 Years
- **Result**: negative
- **Remarks**: Based on data from similar materials

**Titanium dioxide:**

- **Species**: Rat
- **Application Route**: inhalation (dust/mist/fume)
- **Exposure time**: 2 Years
- **Method**: OECD Test Guideline 453
- **Result**: positive
- **Remarks**: The mechanism or mode of action may not be relevant in humans.

**Carcinogenicity - Assessment**: Limited evidence of carcinogenicity in inhalation studies with animals.

**Reproductive toxicity**
Not classified based on available information.

**Components:**

**Pirimiphos-methyl (ISO):**

- **Effects on fertility**: Test Type: Two-generation reproduction toxicity study
  - Species: Rat
  - Application Route: Oral
  - Fertility: NOAEL: 15.4 mg/kg body weight
  - Result: No effects on fertility

- **Effects on foetal development**: Test Type: Development
  - Species: Rat
  - Application Route: Oral
  - Developmental Toxicity: NOAEL: 150 mg/kg body weight
## Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

<table>
<thead>
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<th>Version</th>
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<td>1204410-00011</td>
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</tbody>
</table>

Result: No effects on early embryonic development  
Remarks: Maternal toxicity observed.

Test Type: Development  
Species: Rabbit  
Application Route: Oral  
Developmental Toxicity: NOAEL: 48 mg/kg body weight  
Result: No effects on early embryonic development  
Remarks: Maternal toxicity observed.

### lambda-cyhalothrin (ISO):

**Effects on fertility**  
Test Type: Three-generation study  
Species: Rat  
Application Route: oral (feed)  
General Toxicity - Parent: NOAEL: 2 mg/kg body weight  
General Toxicity F1: LOAEL: 6.7 mg/kg body weight  
Symptoms: Reduced offspring weight gain  
Result: No effects on fertility  
Remarks: Based on data from similar materials

**Effects on foetal development**  
Test Type: Development  
Species: Rat  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 10 mg/kg body weight  
Developmental Toxicity: LOAEL: 15 mg/kg body weight  
Result: No effects on foetal development, Reduced maternal body weight gain, Reduced foetal weight  
Remarks: Based on data from similar materials

Test Type: Development  
Species: Rabbit  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 10 mg/kg body weight  
Developmental Toxicity: NOAEL: 30 mg/kg body weight  
Result: No effects on foetal development, Reduced maternal body weight gain, Reduced foetal weight  
Remarks: Based on data from similar materials

### STOT - single exposure
Causes damage to organs.

## Components:

### Pirimiphos-methyl (ISO):

<table>
<thead>
<tr>
<th>Target Organs</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central nervous system</td>
<td>Causes damage to organs.</td>
</tr>
</tbody>
</table>

### lambda-cyhalothrin (ISO):

<table>
<thead>
<tr>
<th>Target Organs</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nervous system</td>
<td>Causes damage to organs.</td>
</tr>
</tbody>
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SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version 2.7 Revision Date: 2021/04/09 SDS Number: 1204410-00011 Date of last issue: 2020/10/10
Date of first issue: 2017/01/09

STOT - repeated exposure
Not classified based on available information.

**Components:**

**Pirimiphos-methyl (ISO):**
Remarks: Not classified due to inconclusive data.

**Repeated dose toxicity**

**Components:**

**Pirimiphos-methyl (ISO):**
Species: Rat
NOAEL: 0.5 mg/kg
LOAEL: 2.5 mg/kg
Application Route: Oral
Exposure time: 28 d
Target Organs: Central nervous system
Symptoms: Cholinesterase inhibition

Species: Dog
LOAEL: 2 mg/kg
Application Route: Oral
Exposure time: 13 Weeks
Target Organs: Central nervous system
Symptoms: Cholinesterase inhibition
Remarks: No significant adverse effects were reported

Species: Rat
NOAEL: 25 mg/kg
Application Route: Oral
Exposure time: 90 d
Target Organs: Central nervous system
Symptoms: Cholinesterase inhibition

Species: Dog
LOAEL: 0.5 mg/kg
Application Route: Oral
Exposure time: 2 yr
Target Organs: Central nervous system
Symptoms: Cholinesterase inhibition

Species: Rat
LOAEL: 2.1 mg/kg
Application Route: Oral
Exposure time: 2 yr
Target Organs: Central nervous system
Symptoms: Cholinesterase inhibition

**lambda-cyhalothrin (ISO):**
Species: Dog
SAFETY DATA SHEET  
according to GB/T 16483 and GB/T 17519

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

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<th>Version</th>
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</tbody>
</table>

| NOAEL   | 2.5 mg/kg      |
| LOAEL   | 12.5 mg/kg     |
| Application Route | oral (feed)     |
| Exposure time    | 90 d            |
| Symptoms         | reduced body weight gain, reduced food consumption |

Species: Rat

| NOAEL   | 10 mg/kg       |
| LOAEL   | 50 mg/kg       |
| Application Route | Dermal         |
| Exposure time    | 21 d           |
| Target Organs    | Nervous system |

Species: Rat

| NOAEL   | 0.08 mg/kg     |
| LOAEL   | 0.9 mg/kg      |
| Application Route | Inhalation     |
| Exposure time    | 21 d           |
| Target Organs    | Nervous system |

Species: Rat

| NOAEL   | 0.1 mg/kg      |
| LOAEL   | 0.5 mg/kg      |
| Application Route | Oral          |
| Exposure time    | 1 yr           |
| Target Organs    | Nervous system |
| Symptoms         | Gastrointestinal disturbance, Vomiting, Convulsions, ataxia, Liver effects |

Species: Dog

| NOAEL   | 0.1 mg/kg      |
| LOAEL   | 0.5 mg/kg      |
| Application Route | Oral          |
| Exposure time    | 1 yr           |
| Target Organs    | Nervous system |

Species: Rat

| NOAEL   | 10 mg/m3       |
| Application Route | inhalation (dust/mist/fume) |
| Exposure time    | 2 yr            |

Titanium dioxide:
Species: Rat

| NOAEL   | 24,000 mg/kg   |
| Application Route | Ingestion     |
| Exposure time    | 28 Days       |

Species: Rat

Aspiration toxicity
Not classified based on available information.

Experience with human exposure

Components:

Pirimiphos-methyl (ISO):
Ingestion: Symptoms: Nausea, Vomiting, Dizziness, confusion, Headache, Weakness, stomach discomfort, Blurred vision, muscle twitching
Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Pirimiphos-methyl (ISO):

Toxicity to fish:
- LC50 (Oncorhynchus mykiss (rainbow trout)): 0.2 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Daphnia magna (Water flea)): 0.00021 mg/l
  Exposure time: 48 h
  Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants:
- EC50 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity):
- 1,000

Toxicity to fish (Chronic toxicity):
- NOEC (Pimephales promelas (fathead minnow)): 0.13 mg/l
  Exposure time: 35 d
  Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
- NOEC (Daphnia magna (Water flea)): 0.00011 mg/l
  Exposure time: 21 d
  Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity):
- 100

Lambda-cyhalothrin (ISO):

Toxicity to fish:
- LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00019 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203
  Remarks: Based on data from similar materials

- LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.00021 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203
  Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Daphnia magna (Water flea)): 0.00004 mg/l
## Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

<table>
<thead>
<tr>
<th>Components:</th>
<th>Stability in water: Hydrolysis: 50 % (117 d)</th>
</tr>
</thead>
</table>

### Persistence and degradability

**Components:**

**Pirimiphos-methyl (ISO):**

**Stability in water:** Hydrolysis: 50 % (117 d)

- **Titanium dioxide:**
  - **Toxicity to fish:** LC₅₀ (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
    - Exposure time: 96 h
    - Method: OECD Test Guideline 203
  - **Toxicity to daphnia and other aquatic invertebrates:** EC₅₀ (Daphnia magna (Water flea)): > 100 mg/l
    - Exposure time: 48 h
  - **Toxicity to algae/aquatic plants:** EC₅₀ (Skeletonema costatum (marine diatom)): > 10,000 mg/l
    - Exposure time: 72 h
  - **Toxicity to microorganisms:** EC₅₀: > 1,000 mg/l
    - Exposure time: 3 h
    - Method: OECD Test Guideline 209

**Bioaccumulative potential**

**Components:**

**Pirimiphos-methyl (ISO):**

- **Partition coefficient: n-octanol/water:** log Pow: 4.2

**lambda-cyhalothrin (ISO):**

- **Bioaccumulation:** Bioconcentration factor (BCF): 2,240
  - Method: OECD Test Guideline 305
SAFETY DATA SHEET
according to GB/T 16483 and GB/T 17519

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Partition coefficient: n-octanol/water : log Pow: 7.0 (20 °C)

Mobility in soil

Components:

lambda-cyhalothrin (ISO):
Distribution among environmental compartments : log Koc: 5.5

Other adverse effects
No data available

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.
If not otherwise specified: Dispose of as unused product.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number : UN 2811
Proper shipping name : TOXIC SOLID, ORGANIC, N.O.S.
(lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))
Class : 6.1
Packing group : III
Labels : 6.1

IATA-DGR
UN/ID No. : UN 2811
Proper shipping name : Toxic solid, organic, n.o.s.
(lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))
Class : 6.1
Packing group : III
Labels : Toxic
Packing instruction (cargo aircraft) : 677
Packing instruction (passenger aircraft) : 670

IMDG-Code
UN number : UN 2811
Proper shipping name : TOXIC SOLID, ORGANIC, N.O.S.
(lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))
Class : 6.1
Packing group : III
Labels : 6.1
Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version: 2.7
Revision Date: 2021/04/09
SDS Number: 1204410-00011
Date of last issue: 2020/10/10
Date of first issue: 2017/01/09

EmS Code: F-A, S-A
Marine pollutant: yes

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

National Regulations

GB 6944/12268
UN number: UN 2811
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S.
(lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))
Class: 6.1
Packing group: III
Labels: 6.1

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.

15. REGULATORY INFORMATION

National regulatory information
Law on the Prevention and Control of Occupational Diseases

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

16. OTHER INFORMATION

Further information
Date format: yyyy/mm/dd

Full text of other abbreviations
ACGIH: USA. ACGIH Threshold Limit Values (TLV)
CN OEL: Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.
ACGIH / TWA: 8-hour, time-weighted average
CN OEL / PC-TWA: Permissible concentration - time weighted average
Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version: 2.7  Revision Date: 2021/04/09  SDS Number: 1204410-00011  Date of last issue: 2020/10/10
Date of first issue: 2017/01/09

Disclaimers

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.

CN / EN