SAFETY DATA SHEET

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Manufacturer or supplier's details
Company : MSD
Address : 26 Talavera Road, Talavera Corp Centre, Macquarie Park
New South Wales, 2113 Australia
Telephone : (61)-02-8988-8000
Emergency telephone number : (61)-02-8988-8000
E-mail address : EHSDATASTEWARD@msd.com
Telefax : 908-735-1496

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 3
Skin corrosion/irritation : Category 2
Specific target organ toxicity - single exposure : Category 1 (Central nervous system)
Specific target organ toxicity - single exposure : Category 2 (Nervous system)

GHS label elements
Hazard pictograms : ☠️ 🧑
Signal word : Danger
Hazard statements : H302 Harmful if swallowed.
H315 Causes skin irritation.
H331 Toxic if inhaled.
H370 Causes damage to organs (Central nervous system).
H371 May cause damage to organs (Nervous system).
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.
P280 Wear protective gloves.

**Response:**
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P311 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

**Storage:**
P405 Store locked up.

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

Other hazards which do not result in classification
None known.

### 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>polyvinyl chloride</td>
<td>9002-86-2</td>
<td>&gt;= 60 -&lt;= 100</td>
</tr>
<tr>
<td>Pirimiphos-methyl (ISO)</td>
<td>29232-93-7</td>
<td>&gt;= 10 -&lt; 30</td>
</tr>
<tr>
<td>lambda-cyhalothrin (ISO)</td>
<td>91465-08-6</td>
<td>&gt;= 1 -&lt; 10</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>

### SECTION 4. FIRST AID MEASURES

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

**If inhaled:**
If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention.
In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

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

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 delayed: Harmful if swallowed. Causes skin irritation. Toxic if inhaled. Causes damage to organs.

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. 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.

Hazchem Code: 2X

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions : Discharge into the environment must be avoided. 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.

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.

Advice on safe handling : Do not get on skin or clothing.
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.
Keep container tightly closed.
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.
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.

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters
SAFETY DATA SHEET

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis
--- | --- | --- | --- | ---
polyvinyl chloride | 9002-86-2 | TWA (Respirable fraction) | 1 mg/m³ | ACGIH
Pirimiphos-methyl (ISO) | 29232-93-7 | TWA | 60 µg/m³ (OEB 3) | Internal
Further information: Skin Wipe limit | 600 µg/100 cm² | Internal
lambda-cyhalothrin (ISO) | 91465-08-6 | TWA | 5 µg/m³ (OEB 4) | Internal
Further information: Skin Wipe limit | 50 µg/100 cm² | Internal
Titanium dioxide | 13463-67-7 | TWA | 10 mg/m³ | AU OEL
Further information: This value is for inhalable dust containing no asbestos and < 1% crystalline silica TWA | 10 mg/m³ (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
Hand protection: Chemical-resistant gloves

Material: Consider double gloving.
Eye 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES
### Safety Data Sheet

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tr>
<td><strong>Version</strong></td>
<td>2.4</td>
</tr>
<tr>
<td><strong>Revision Date</strong></td>
<td>09/13/2019</td>
</tr>
<tr>
<td><strong>SDS Number</strong></td>
<td>1204404-00008</td>
</tr>
<tr>
<td><strong>Date of last issue</strong></td>
<td>18.10.2018</td>
</tr>
<tr>
<td><strong>Date of first issue</strong></td>
<td>09.01.2017</td>
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<td><strong>Appearance</strong></td>
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<td><strong>pH</strong></td>
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<td><strong>Melting point/freezing point</strong></td>
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<td><strong>Initial boiling point and boiling range</strong></td>
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<td><strong>Flash point</strong></td>
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<td><strong>Evaporation rate</strong></td>
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<td><strong>Flammability (solid, gas)</strong></td>
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</tr>
<tr>
<td><strong>Flammability (liquids)</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Upper explosion limit / Upper flammability limit</strong></td>
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</tr>
<tr>
<td><strong>Lower explosion limit / Lower flammability limit</strong></td>
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</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
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</tr>
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<td><strong>Relative vapour density</strong></td>
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<tr>
<td><strong>Relative density</strong></td>
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<tr>
<td><strong>Density</strong></td>
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<tr>
<td><strong>Solubility(ies)</strong></td>
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</tr>
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<td>Water solubility</td>
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<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
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</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
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</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
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<tr>
<td><strong>Viscosity</strong></td>
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<tr>
<td>Viscosity, kinematic</td>
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<tr>
<td><strong>Explosive properties</strong></td>
<td>Not explosive</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>The substance or mixture is not classified as oxidizing.</td>
</tr>
<tr>
<td><strong>Molecular weight</strong></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: Can react with strong oxidizing agents.
Conditions to avoid: None known.
Incompatible materials: Oxidizing agents
Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes:
- Skin contact
- Ingestion
- Eye contact

Acute toxicity:
Harmful if swallowed.
Toxic if inhaled.

Product:
- Acute oral toxicity: Acute toxicity estimate: 654.55 mg/kg
  Method: Calculation method
- Acute inhalation toxicity: Acute toxicity estimate: 0.7676 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
  Method: Calculation method
- Acute dermal toxicity: Acute toxicity estimate: > 2,000 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
Not classified based on available information.

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

Chronic toxicity

Germ cell mutagenicity
Not classified based on available information.

Components:

Pirimiphos-methyl (ISO):
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
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
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):**

<table>
<thead>
<tr>
<th>Species</th>
<th>Mouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Route</td>
<td>oral (feed)</td>
</tr>
<tr>
<td>Exposure time</td>
<td>2 Years</td>
</tr>
<tr>
<td>Result</td>
<td>negative</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Route</td>
<td>oral (feed)</td>
</tr>
<tr>
<td>Exposure time</td>
<td>2 Years</td>
</tr>
<tr>
<td>Result</td>
<td>negative</td>
</tr>
<tr>
<td>Remarks</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

**Titanium dioxide:**

<table>
<thead>
<tr>
<th>Species</th>
<th>Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Route</td>
<td>inhalation (dust/mist/fume)</td>
</tr>
<tr>
<td>Exposure time</td>
<td>2 Years</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 453</td>
</tr>
<tr>
<td>Result</td>
<td>positive</td>
</tr>
<tr>
<td>Remarks</td>
<td>The mechanism or mode of action may not be relevant in humans.</td>
</tr>
</tbody>
</table>

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
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

**STOT - single exposure**
Causes damage to organs (Central nervous system).
May cause damage to organs (Nervous system).

**Components:**

**Pirimiphos-methyl (ISO):**
Target Organs: Central nervous system
Assessment: Causes damage to organs.

**lambda-cyhalothrin (ISO):**
Target Organs: Nervous system
Assessment: Causes damage to organs.

**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):

<table>
<thead>
<tr>
<th>Species</th>
<th>NOAEL</th>
<th>LOAEL</th>
<th>Application Route</th>
<th>Exposure time</th>
<th>Target Organs</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rat</td>
<td>0.5 mg/kg</td>
<td>2.5 mg/kg</td>
<td>Oral</td>
<td>28 d</td>
<td>Central nervous system</td>
<td>cholinesterase inhibition</td>
</tr>
<tr>
<td>Dog</td>
<td>2 mg/kg</td>
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<td>Oral</td>
<td>13 Weeks</td>
<td>Central nervous system</td>
<td>cholinesterase inhibition</td>
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<td>Rat</td>
<td>25 mg/kg</td>
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<td>Oral</td>
<td>90 d</td>
<td>Central nervous system</td>
<td>cholinesterase inhibition</td>
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<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No significant adverse effects were reported</td>
</tr>
</tbody>
</table>

### lambda-cyhalothrin (ISO):

<table>
<thead>
<tr>
<th>Species</th>
<th>NOAEL</th>
<th>LOAEL</th>
<th>Application Route</th>
<th>Exposure time</th>
<th>Target Organs</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog</td>
<td>0.5 mg/kg</td>
<td>2.5 mg/kg</td>
<td>Oral</td>
<td>2 yr</td>
<td>Central nervous system</td>
<td>cholinesterase inhibition</td>
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<td>Rat</td>
<td>2.1 mg/kg</td>
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<td>oral (feed)</td>
<td>90 d</td>
<td>Central nervous system</td>
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<td>Rat</td>
<td>10 mg/kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>LOAEL</td>
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<td>50 mg/kg</td>
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SAFETY DATA SHEET

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version 2.4  Revision Date: 09/13/2019  SDS Number: 1204404-00008  Date of last issue: 18.10.2018
Date of first issue: 09.01.2017

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: Dog
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

Titanium dioxide:
Species: Rat
NOAEL: 24,000 mg/kg
Application Route: Ingestion
Exposure time: 28 Days

Species: Rat
NOAEL: 10 mg/m3
Application Route: Inhalation (dust/mist/fume)
Exposure time: 2 yr

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

lambda-cyhalothrin (ISO):
Inhalation: Symptoms: Cough, Local irritation, sneezing
Skin contact: Symptoms: Skin irritation, tingling, superficial burning sensation, Local irritation
Remarks: Can be absorbed through skin.
Eye contact: Symptoms: Eye irritation
Ingestion: Symptoms: Gastrointestinal disturbance
SAFETY DATA SHEET

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

SECTION 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

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

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
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity): NOEC (Pimephales promelas (fathead minnow)): 0.000062 mg/l
Exposure time: 32 d
Method: OECD Test Guideline 210
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 0.0035 µg/l
Exposure time: 21 d

Remarks:

Based on data from similar materials

Based on data from similar materials

Based on data from similar materials

Based on data from similar materials
ic toxicity) Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

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

Persistence and degradability

Components:

polyvinyl chloride:
Biodegradability : Result: Not readily biodegradable.

Pirimiphos-methyl (ISO): Stability in water : Hydrolysis: 50 % (117 d)

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

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

SECTION 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
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

ADG
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
SAFETY DATA SHEET

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version 2.4  Revision Date: 09/13/2019  SDS Number: 1204404-00008  Date of last issue: 18.10.2018
Date of first issue: 09.01.2017

Hazchem Code : 2X

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

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

Prohibition/Licensing Requirements : There is no applicable prohibition or notification/licensing requirements, including for carcinogens under Commonwealth, State or Territory legislation.

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

SECTION 16. OTHER INFORMATION

Further information

Revision Date : 09/13/2019
Date format : dd.mm.yyyy

Full text of other abbreviations
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
AU OEL : Australia. Workplace Exposure Standards for Airborne Contaminants.

ACGIH / TWA : 8-hour, time-weighted average
AU OEL / TWA : Exposure standard - time weighted average

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with
**SAFETY DATA SHEET**

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

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<thead>
<tr>
<th>Version</th>
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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.

AU / EN