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

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

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

1.1 Product identifier
Trade name : Pirimiphos-Methyl / Lambda-Cyhalothrin 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
Kilsheelan
Clonmel Tipperary, IE

Telephone : 353-51-601000

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)
Acute toxicity, Category 4 H302: Harmful if swallowed.
Acute toxicity, Category 3 H331: Toxic if inhaled.
Skin irritation, Category 2 H315: Causes skin irritation.
Eye irritation, Category 2 H319: Causes serious eye irritation.
Specific target organ toxicity - single exposure, Category 1 H370: Causes damage to organs.
Short-term (acute) aquatic hazard, Category 1 H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1 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 : H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H370 Causes damage to organs.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

**Prevention:**
- P273 Avoid release to the environment.
- P280 Wear protective gloves/eye protection/face protection.

**Response:**
- P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
- P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor.
- P337 + P313 If eye irritation persists: Get medical advice/attention.
- P391 Collect spillage.

Hazardous components which must be listed on the label:
- Pirimiphos-methyl (ISO)
- Lambda-cyhalothrin (ISO)

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

**Components**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Registration number</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pirimiphos-methyl (ISO)</td>
<td>29232-93-7</td>
<td>249-528-5</td>
<td>015-134-00-5</td>
<td></td>
<td>Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
</tbody>
</table>
STOT SE 1; H370 (Central nervous system)  
Aquatic Acute 1; H400  
Aquatic Chronic 1; H410

M-Factor (Acute aquatic toxicity): 1.000  
M-Factor (Chronic aquatic toxicity): 100

| lambda-cyhalothrin (ISO) | 91465-08-6 | Acute Tox. 3; H301  
415-130-7 | Acute Tox. 2; H330  
607-252-00-6 | Acute Tox. 3; H311  
Acute Irrit. 2; H319  
STOT SE 1; H370 (Nervous system)  
Aquatic Acute 1; H400  
Aquatic Chronic 1; H410

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

STOT SE 1; H370 (Central nervous system)  
Aquatic Acute 1; H400  
Aquatic Chronic 1; H410

M-Factor (Acute aquatic toxicity): 1.000  
M-Factor (Chronic aquatic toxicity): 100

For explanation of abbreviations see section 16.

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. 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.

4.2 Most important symptoms and effects, both acute and delayed
Risks:
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
Toxic if inhaled.
Causes damage to organs.

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:
None known.

5.2 Special hazards arising from the substance or mixture
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
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: Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

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.

6.3 Methods and material for containment and cleaning up

Methods for 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.

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.

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.

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.

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.

Advice on common storage:
Do not store with the following product types:
- Strong oxidizing agents
- Organic peroxides
- Explosives
- Gases

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<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>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>Further information: Skin</td>
<td></td>
<td></td>
<td></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>Further information: Skin</td>
<td></td>
<td></td>
<td></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>
8.2 Exposure controls

**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**

- **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.

- **Hand protection**
  - **Material**: Chemical-resistant gloves
  - **Remarks**: Consider double gloving.

- **Skin and body protection**
  - **Material**: 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.

- **Respiratory protection**
  - **Filter type**: Particulates type (P)

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

- **Physical state**: solid
- **Colour**: No data available
- **Odour**: characteristic
- **Odour Threshold**: No data available
- **Melting point/freezing point**: No data available
- **Initial boiling point and boiling range**: 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
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Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version 3.5 Revision Date: 09.04.2021 SDS Number: 1204541-00012 Date of last issue: 10.10.2020
Date of first issue: 09.01.2017

8/22

9.2 Other information
Explosives: Not explosive
Oxidizing properties: The substance or mixture is not classified as oxidizing.
Evaporation rate: No data available
Molecular weight: 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: Can react with strong oxidizing agents.
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according to Regulation (EC) No. 1907/2006

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version 3.5  Revision Date: 09.04.2021  SDS Number: 1204541-00012  Date of last issue: 10.10.2020
Date of first issue: 09.01.2017

10.4 Conditions to avoid
Conditions to avoid : None known.

10.5 Incompatible materials
Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products
No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Information on likely routes of exposure : 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
Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

**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

**Skin corrosion/irritation**
Causes skin irritation.

**Components:**

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

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

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

**Components:**

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

**Lambda-cyhalothrin (ISO):**
- Species: Rabbit
- Result: Mild 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.

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
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):
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

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

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):
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):

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
NOAEL: 2 mg/kg
Application Route: Oral
Exposure time: 13 Weeks
Target Organs: Central nervous system
Symptoms: Cholinesterase inhibition

Species: Rat
NOAEL: 25 mg/kg
Application Route: Oral
Exposure time: 90 d
Target Organs: Central nervous system
Symptoms: Cholinesterase inhibition
Remarks: No significant adverse effects were reported

Species: Dog
NOAEL: 0,5 mg/kg
Application Route: Oral
Exposure time: 2 yr
Target Organs: Central nervous system
Symptoms: Cholinesterase inhibition

Species: Rat
NOAEL: 2,1 mg/kg
Application Route: Oral
Exposure time: 2 yr
Target Organs: Central nervous system
Symptoms: Cholinesterase inhibition

lambda-cyhalothrin (ISO):
Species: Dog  
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: 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

Aspiration toxicity
Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Product:
Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Experience with human exposure

Components:

Pirimiphos-methyl (ISO):
Ingestion: Symptoms: Nausea, Vomiting, Dizziness, confusion, Headache, Weakness, stomach discomfort, Blurred vision, muscle twitching
SECTION 12: Ecological information

12.1 Toxicity

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: 0.13 mg/l  
  Exposure time: 35 d  
  Species: Pimephales promelas (fathead minnow)  
  Method: OECD Test Guideline 210

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

- M-Factor (Chronic aquatic toxicity): 100

lambda-cyhalothrin (ISO):
- Toxicity to fish: LC50 (Onocorhynchus 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
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<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
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<th>Date of first issue:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5</td>
<td>09.04.2021</td>
<td>1204541-00012</td>
<td>10.10.2020</td>
<td>09.01.2017</td>
</tr>
</tbody>
</table>

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

M-Factor (Acute aquatic toxicity): 10.000

**Toxicity to fish (Chronic toxicity)**  
NOEC: 0,000062 mg/l  
Exposure time: 32 d  
Species: Pimephales promelas (fathead minnow)  
Method: OECD Test Guideline 210  
Remarks: Based on data from similar materials

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**  
NOEC: 0,0035 µg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211  
Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity): 10.000

**12.2 Persistence and degradability**

**Components:**

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

**12.3 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)

**12.4 Mobility in soil**

**Components:**

**lambda-cyhalothrin (ISO):**
Distribution among environment: log Koc: 5,5
**SAFETY DATA SHEET**

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<table>
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<tr>
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</tr>
</tbody>
</table>

mental compartments

12.5 Results of PBT and vPvB assessment

**Product:**

**Assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

**Product:**

**Endocrine disrupting potential**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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.

If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number or ID number

<table>
<thead>
<tr>
<th>ADN</th>
<th>ADR</th>
<th>RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN 2811</td>
<td>UN 2811</td>
<td>UN 2811</td>
<td>UN 2811</td>
<td>UN 2811</td>
</tr>
</tbody>
</table>

14.2 UN proper shipping name

<table>
<thead>
<tr>
<th>ADN</th>
<th>ADR</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOXIC SOLID, ORGANIC, N.O.S. (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))</td>
<td>TOXIC SOLID, ORGANIC, N.O.S. (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))</td>
<td>TOXIC SOLID, ORGANIC, N.O.S.</td>
</tr>
</tbody>
</table>
### 14.3 Transport hazard class(es)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG</td>
<td>TOXIC SOLID, ORGANIC, N.O.S. (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))</td>
</tr>
<tr>
<td>IATA</td>
<td>Toxic solid, organic, n.o.s. (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))</td>
</tr>
</tbody>
</table>

### 14.4 Packing group

#### ADN
- Packing group: III
- Classification Code: T2
- Hazard Identification Number: 60
- Labels: 6.1

#### ADR
- Packing group: III
- Classification Code: T2
- Hazard Identification Number: 60
- Labels: 6.1
- Tunnel restriction code: (E)

#### RID
- Packing group: III
- Classification Code: T2
- Hazard Identification Number: 60
- Labels: 6.1

#### IMDG
- Packing group: III
- Labels: 6.1
- EmS Code: F-A, S-A

#### IATA (Cargo)
- Packing instruction (cargo aircraft): 677
- Packing instruction (LQ): Y645
- Packing group: III
- Labels: Toxic

#### IATA (Passenger)
- Packing instruction (passenger aircraft): 670
- Packing instruction (LQ): Y645
- Packing group: III
- Labels: Toxic
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version 3.5 Revision Date: 09.04.2021 SDS Number: 1204541-00012 Date of last issue: 10.10.2020 Date of first issue: 09.01.2017

14.5 Environmental hazards

<table>
<thead>
<tr>
<th>ADN</th>
<th>Environmentally hazardous : yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
<td>Environmentally hazardous : yes</td>
</tr>
<tr>
<td>RID</td>
<td>Environmentally hazardous : yes</td>
</tr>
<tr>
<td>IMDG</td>
<td>Marine pollutant : yes</td>
</tr>
</tbody>
</table>

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 Maritime transport in bulk according to IMO instruments

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): Not applicable

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: Not applicable


<table>
<thead>
<tr>
<th>H2</th>
<th>ACUTE TOXIC</th>
<th>Quantity 1</th>
<th>Quantity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>ENVIRONMENTAL HAZARDS</td>
<td>100 t</td>
<td>200 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...
The components of this product are reported in the following inventories:

AICS : not determined

DSL : not determined

IECSC : not determined

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

H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H311 : Toxic in contact with skin.
H312 : Harmful in contact with skin.
H315 : Causes skin irritation.
H319 : Causes serious eye irritation.
H330 : Fatal if inhaled.
H370 : Causes damage to organs.
H400 : Very toxic to aquatic life.
H410 : Very 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
Eye Irrit. : Eye irritation
Skin Irrit. : Skin irritation
STOT SE : Specific target organ toxicity - single exposure

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; AIIC - Australian Inventory of Industrial Chemicals; 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
Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version 3.5  Revision Date: 09.04.2021  SDS Number: 1204541-00012  Date of last issue: 10.10.2020  Date of first issue: 09.01.2017

Sources of key data used to compile the Safety Data Sheet:

Classification of the mixture:

- Acute Tox. 4: H302  Calculation method
- Acute Tox. 3: H331  Calculation method
- Skin Irrit. 2: H315  Calculation method
- Eye Irrit. 2: H319  Calculation method
- STOT SE 1: H370  Calculation method
- 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.