

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

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| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

SECTION 1: IDENTIFICATION

Product name : Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Manufacturer or supplier's details

Company : Intervet Australia Pty Limited (trading as MSD Animal Health)

Address : 91-105 Harpin Street
Bendigo 3550, Victoria Australia

Telephone : 1 800 033 461

Emergency telephone number : Poisons Information Centre: Phone 13 11 26

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 3

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 2B

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.

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mulation**

Version 7.0 Revision Date: 14.04.2025 SDS Number: 1204404-00020 Date of last issue: 06.07.2024
Date of first issue: 09.01.2017

H315 + H320 Causes skin and eye irritation.
H331 Toxic if inhaled.
H370 Causes damage to organs (Central nervous system).
H371 May cause damage to organs (Nervous system).

Precautionary statements :

Prevention:
P261 Avoid breathing 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/ 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.

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

| Chemical name | CAS-No. | Concentration (% w/w) |
|--------------------------|------------|------------------------|
| Polyvinyl chloride | 9002-86-2 | ≥ 60 - ≤ 100 |
| Pirimiphos-methyl (ISO) | 29232-93-7 | ≥ 10 - < 30 |
| lambda-cyhalothrin (ISO) | 91465-08-6 | ≥ 1 - < 10 |

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|----------------|------------------------------|------------------------------|-------------------------------------------------------------------|
| Version 7.0 | Revision Date: 14.04.2025 | SDS Number: 1204404-00020 | Date of last issue: 06.07.2024 Date of first issue: 09.01.2017 |
|----------------|------------------------------|------------------------------|-------------------------------------------------------------------|

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|------------------|------------|-----|
| Titanium dioxide | 13463-67-7 | < 1 |
|------------------|------------|-----|

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 and eye 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 (CO ₂) Dry chemical |
| Unsuitable extinguishing media | : | None known. |
| Specific hazards during fire-fighting | : | Exposure to combustion products may be a hazard to health. |
| Hazardous combustion prod- | : | Carbon oxides |

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

ucts

Nitrogen oxides (NO_x)
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 (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 : Surround spill with absorbents and place a damp covering over the area to minimise entry of the material into the air.
Add excess liquid to allow the material to enter into solution.
Soak up with inert absorbent material.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

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

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.

|| Advice on safe handling : Do not get on skin or clothing.

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

| | |
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| | <p>Avoid breathing dust, fume, gas, mist, vapours or spray.</p> <p>Do not swallow.</p> <p>Do not get in eyes.</p> <p>Wash skin thoroughly after handling.</p> <p>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment</p> <p>Keep container tightly closed.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Take care to prevent spills, waste and minimize release to the environment.</p> |
| Hygiene measures | <p>: If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.</p> <p>When using do not eat, drink or smoke.</p> <p>Wash contaminated clothing before re-use.</p> <p>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.</p> |
| Conditions for safe storage | <p>: Keep in properly labelled containers.</p> <p>Store locked up.</p> <p>Keep tightly closed.</p> <p>Keep in a cool, well-ventilated place.</p> <p>Store in accordance with the particular national regulations.</p> |
| Materials to avoid | <p>: Do not store with the following product types:</p> <p>Explosives</p> |

Components with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|--------------------------|---------------------------|-------------------------------------|------------------------------------------------|----------|
| Polyvinyl chloride | 9002-86-2 | TWA (Respirable particulate matter) | 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 |

Engineering measures : All engineering controls should be implemented by facility

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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 | : | |
| Material | : | Chemical-resistant gloves |
| Remarks | : | 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

| | | |
|-----------------------------------------|---|-------------------|
| Appearance | : | solid |
| 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 |

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

| | | |
|--------------------------------------------------|---|----------------------------------------------------------|
| 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 |
| Particle characteristics | : | |
| Particle size | : | No data available |

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 |

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| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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 |

**Pirimiphos-Methyl / Lambda-Cyhalothrin For-
mulation**

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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 |

**Pirimiphos-Methyl / Lambda-Cyhalothrin For-
mulation**

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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

Test Type: Development

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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 (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. |

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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 |

| | |
|-------------------|------------------------------------------------|
| 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 |
| 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 |

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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 |

Titanium dioxide:

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

| | |
|-------------------|-------------------------------|
| Species | : Rat |
| NOAEL | : 10 mg/m ³ |
| 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):**

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version 7.0 Revision Date: 14.04.2025 SDS Number: 1204404-00020 Date of last issue: 06.07.2024
Date of first issue: 09.01.2017

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

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

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

| | |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 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:****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 |
|-----------------|---------------------------------------------------------------------------|

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

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 | : Do not dispose of waste into sewer. 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 |
| Environmentally hazardous | : yes |

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. |

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

II (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. |

II (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))

| | | |
|---------------------------|---|-----|
| Class | : | 6.1 |
| Packing group | : | III |
| Labels | : | 6.1 |
| Hazchem Code | : | 2X |
| Environmentally hazardous | : | yes |

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**

| | | |
|-------------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Therapeutic Goods (Poisons Standard) Instrument | : | Schedule 7 (Please use the original publication to check for specific uses, specific conditions or threshold limits that might apply for this chemical) |
| Prohibition/Licensing Requirements | : | There is no applicable prohibition, authorisation and restricted use requirements, including for carcinogens referred to in Schedule 10 of the model WHS Act and Regulations. |

The components of this product are reported in the following inventories:

| | | |
|-------|---|----------------|
| AICS | : | not determined |
| DSL | : | not determined |
| IECSC | : | not determined |

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

SECTION 16: ANY OTHER RELEVANT INFORMATION**Further information**

Revision Date : 14.04.2025
Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

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

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

AIIC - Australian Inventory of Industrial Chemicals; 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 x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recom-

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

| | | | |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 06.07.2024 |
| 7.0 | 14.04.2025 | 1204404-00020 | Date of first issue: 09.01.2017 |

mendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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.

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