according to GB/T 16483 and GB/T 17519



# Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 5.0 2024/09/28 1204410-00020 Date of first issue: 2017/01/09

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Manufacturer or supplier's details

Company : MSD

Address : No. 485 Jing Tai Road

Pu Tuo District - Shanghai - China 200331

Telephone : +1-908-740-4000

Emergency telephone number : 86-571-87268110

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product Restrictions on use : Not applicable

#### 2. HAZARDS IDENTIFICATION

# **Emergency Overview**

Appearance : solid

Colour : No data available
Odour : characteristic

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

**GHS Classification** 

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 3

Acute toxicity (Dermal) : Category 5

Skin corrosion/irritation : Category 2

Serious eye damage/eye irri-

tation

Category 2B

Specific target organ toxicity - :

single exposure

Category 1

according to GB/T 16483 and GB/T 17519



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Short-term (acute) aquatic

hazard

Category 1

Long-term (chronic) aquatic

hazard

Category 1

**GHS** label elements

Hazard pictograms







Signal word : Danger

Hazard statements : H302 Harmful if swallowed.

H313 May be harmful in contact with skin. H315 + H320 Causes skin and eye irritation.

H331 Toxic if inhaled.

H370 Causes damage to organs.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : \_

Prevention:

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P302 + P352 IF ON SKIN: Wash with plenty of water.

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/ atten-

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

P391 Collect spillage.

according to GB/T 16483 and GB/T 17519



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Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

#### Physical and chemical hazards

Not classified based on available information.

### **Health hazards**

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

#### **Environmental hazards**

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

#### Other hazards which do not result in classification

None known.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

# Components

Chemical name	CAS-No.	Concentration (% w/w)	
Polyvinyl chloride	9002-86-2	>= 70 -< 90	
Pirimiphos-methyl (ISO)	29232-93-7	>= 10 -< 20	
lambda-cyhalothrin (ISO)	91465-08-6	>= 2.5 -< 10	
Titanium dioxide	13463-67-7	>= 0.1 -< 1	

### 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice 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

according to GB/T 16483 and GB/T 17519



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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.

May be harmful in contact with skin. 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.

#### 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

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- :

ucts

Carbon oxides

Nitrogen oxides (NOx) Chlorine compounds Fluorine compounds

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : Use personal protective equipment.

according to GB/T 16483 and GB/T 17519



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tive equipment and emergency procedures

Follow safe handling advice (see section 7) and personal pro-

tective 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 absor-

bent.

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 deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### 7. HANDLING AND STORAGE

Handling

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

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

ventilation.

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

Do not breathe dust, fume, gas, mist, vapours or spray.

Do not swallow. Do not get in eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Keep container tightly closed.

Do not eat, drink or smoke when using this product.

Take care to prevent spills, waste and minimize release to the

environment.

Avoidance of contact : Oxidizing agents

Storage

Conditions for safe storage : Keep in properly labelled containers.

Store locked up. Keep tightly closed.

Keep in a cool, well-ventilated place.

according to GB/T 16483 and GB/T 17519



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Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

**Explosives** 

Packaging material : Unsuitable material: None known.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis		
Polyvinyl chloride	9002-86-2	PC-TWA (Total dust)	5 mg/m3	CN OEL		
		TWA (Respirable particulate matter)	1 mg/m3	ACGIH		
Pirimiphos-methyl (ISO)	29232-93-7	TWA	60 μg/m3 (OEB 3)	Internal		
	Further inform	Further information: Skin				
		Wipe limit	600 μg/100 cm <sup>2</sup>	Internal		
lambda-cyhalothrin (ISO)	91465-08-6	TWA	5 μg/m3 (OEB 4)	Internal		
	Further inform	Further information: Skin				
		Wipe limit	50 μg/100 cm <sup>2</sup>	Internal		
Titanium dioxide	13463-67-7	PC-TWA (Total dust)	8 mg/m3	CN OEL		
	Further inform	Further information: G2B - Possibly carcinogenic to humans				

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 con-

tainment devices). Minimize open handling.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type : Particulates type

Eye/face protection : Wear safety glasses with side shields or goggles.

If the work environment or activity involves dusty conditions,

mists or aerosols, wear the appropriate goggles.

Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or

aerosols.

according to GB/T 16483 and GB/T 17519



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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, dis-

posable suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Hygiene measures : If exposure to chemical is likely during typical use, provide

eye flushing systems and safety showers close to the work-

ing place.

When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

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

use of administrative controls.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Colour : No data available

Odour : characteristic

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : Not applicable

Evaporation rate : No data available

Flammability (solid, gas) : Not classified as a flammability hazard

Flammability (liquids) : No data available

Upper explosion limit / Upper

flammability limit

No data available

according to GB/T 16483 and GB/T 17519



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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

#### 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard. Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

Can react with strong oxidizing agents.

Conditions to avoid : None known. Incompatible materials : Oxidizing agents

Hazardous decomposition : No hazardou

products

No hazardous decomposition products are known.

#### 11. TOXICOLOGICAL INFORMATION

Exposure routes : Skin contact

Ingestion Eye contact

according to GB/T 16483 and GB/T 17519



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#### **Acute toxicity**

Harmful if swallowed.

May be harmful in contact with skin.

Toxic if inhaled.

**Product:** 

Acute toxicity estimate: 654.55 mg/kg Acute oral toxicity

Method: Calculation method

Acute inhalation toxicity Acute toxicity estimate: 0.7505 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

: Acute toxicity estimate: 4,964 mg/kg Acute dermal toxicity

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 : LD50 (Rat): 250 - 750 mg/kg

administration)

Application Route: Intraperitoneal

according to GB/T 16483 and GB/T 17519



# Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

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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 inhala-

tion toxicity

Skin corrosion/irritation

Causes skin irritation.

**Components:** 

Pirimiphos-methyl (ISO):

Species : Rabbit Result : irritating

lambda-cyhalothrin (ISO):

Species : Rabbit

Result : No skin irritation

Titanium dioxide:

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

Causes eye irritation.

**Components:** 

Pirimiphos-methyl (ISO):

Species : Rabbit

Result : Mild eye irritation

lambda-cyhalothrin (ISO):

Species : Rabbit

Result : Mild eye irritation

Titanium dioxide:

Species : Rabbit

Result : No eye irritation

according to GB/T 16483 and GB/T 17519



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### 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

Test Type Exposure routes Dermal Species Guinea pig

Result Not a skin sensitizer.

#### Titanium dioxide:

Test Type Local lymph node assay (LLNA)

Exposure routes Skin contact Species Mouse Result negative

## Germ cell mutagenicity

Not classified based on available information.

#### **Components:**

#### Pirimiphos-methyl (ISO):

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

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

according to GB/T 16483 and GB/T 17519



# Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

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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

Test Type: In vivo micronucleus test Genotoxicity in vivo

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
Exposure time : Oral : 80 weeks : negative Result

ment

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

according to GB/T 16483 and GB/T 17519



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#### lambda-cyhalothrin (ISO):

Species: MouseApplication Route: oral (feed)Exposure time: 2 YearsResult: 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 hu-

mans.

Carcinogenicity - Assess-

ment

: 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 develop- : Test Type: Development

ment

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

according to GB/T 16483 and GB/T 17519



# Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

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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 develop-

ment

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.

according to GB/T 16483 and GB/T 17519



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**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 LOAEL Application Route Exposure time Target Organs Symptoms : Dog 2 mg/kg Oral 13 Weeks

Central nervous system Symptoms cholinesterase inhibition

Rat 25 mg/kg Oral 90 d

Central nervous system cholinesterase inhibition

Remarks No significant adverse effects were reported

Species Dog LOAEL
Application Route
Exposure time 0.5 mg/kg Oral 2 yr

Central nervous system Symptoms cholinesterase inhibition

**Species** Rat LOAEL 2.1 mg/kg LOAEL
Application Route
Exposure time
Target Organs
Symptoms Oral 2 yr

: Central nervous system **Symptoms** cholinesterase inhibition

lambda-cyhalothrin (ISO):

Species Dog

according to GB/T 16483 and GB/T 17519



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

Symptoms

Species
NOAEL
LOAEL
Application Route
Exposure time
Target Organs 10 mg/kg : 50 mg/kg : Dermal : 21 d

Target Organs : Nervous system

Species : Rat

Species
NOAEL
LOAEL
Application Route
Exposure time
Target Organs : 0.08 mg/kg : 0.9 mg/kg : Inhalation : 21 d

: Nervous system Target Organs

: Dog Species NOAEL : 0.1 mg/kg LOAEL : 0.5 mg/kg Application Route : Oral
Exposure time : 1 yr
Target Organs : Nerv

: Nervous system

: Gastrointestinal disturbance, Vomiting, Convulsions, ataxia, Symptoms

Liver effects

#### Titanium dioxide:

Species : Rat

NOAEL 24,000 mg/kg Application Route Exposure time : Ingestion 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, Head-

according to GB/T 16483 and GB/T 17519



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ache, Weakness, stomach discomfort, Blurred vision, muscle

twitching

lambda-cyhalothrin (ISO):

Inhalation : Symptoms: Cough, Local irritation, sneezing

Skin contact : Symptoms: Skin irritation, tingling, superficial burning sensa-

tion, Local irritation

Remarks: Can be absorbed through skin.

Eye contact : Symptoms: Eye irritation

Ingestion : Symptoms: Gastrointestinal disturbance

#### 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

ma/l

Exposure time: 72 h

Method: OECD Test Guideline 201

M-Factor (Acute aquatic tox- :

icity)

1,000

Toxicity to fish (Chronic tox-

icity)

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 (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.00011 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

100

lambda-cyhalothrin (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00019 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

according to GB/T 16483 and GB/T 17519



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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

M-Factor (Acute aquatic tox- : 10,000

Toxicity to fish (Chronic tox-

icity)

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 (Chron-

ic 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

M-Factor (Chronic aquatic

toxicity)

: 10,000

Titanium dioxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

aquatic invertebrates

Toxicity to daphnia and other : 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)

according to GB/T 16483 and GB/T 17519



# Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 5.0 2024/09/28 1204410-00020 Date of first issue: 2017/01/09

**Bioaccumulative potential** 

**Components:** 

Pirimiphos-methyl (ISO):

Partition coefficient: n- : log Pow: 4.2

octanol/water

lambda-cyhalothrin (ISO):

Bioaccumulation : Bioconcentration factor (BCF): 2,240

Method: OECD Test Guideline 305

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

octanol/water

Mobility in soil

Components:

lambda-cyhalothrin (ISO):

Distribution among environ- : log Koc: 5.5

mental compartments

Other adverse effects

No data available

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 han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

14. TRANSPORT INFORMATION

International Regulations

**UNRTDG** 

UN number : UN 2811

Proper shipping name : TOXIC SOLID, ORGANIC, N.O.S.

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

Class : 6.1
Packing group : III
Labels : 6.1
Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 2811

Proper shipping name : Toxic solid, organic, n.o.s.

according to GB/T 16483 and GB/T 17519



# Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 5.0 2024/09/28 1204410-00020 Date of first issue: 2017/01/09

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

Class : 6.1
Packing group : III
Labels : Toxic
Packing instruction (cargo : 677

aircraft)

Packing instruction (passen: 6

ger 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**

GB 6944/12268

UN number : UN 2811

Proper shipping name : TOXIC SOLID, ORGANIC, N.O.S.

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

Class : 6.1
Packing group : III
Labels : 6.1
Marine pollutant : 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.

#### 15. REGULATORY INFORMATION

#### **National regulatory information**

Law on the Prevention and Control of Occupational Diseases

#### **Regulations on Safety Management of Hazardous Chemicals**

Catalogue of Hazardous Chemicals : This product is not listed in the cata-

logue of hazardous chemicals, but it meets the definition of hazardous chemicals and its principles of de-

termination.

according to GB/T 16483 and GB/T 17519



# Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

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Identification of Major Hazard Installations for Hazardous Chemicals (GB : Not listed

18218)

Hazardous Chemicals for Priority Management under Not listed

SAWS

Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals Not listed

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import : Not listed

and Export

**Regulation on the Administration of Precursor Chemicals** 

Catalogue and Classification of Precursor Chemicals : Not listed

Yangtze River Protection Law

This product does not contain any dangerous chemicals prohibited for inland river transport.

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

**AICS** not determined

DSL not determined

**IECSC** not determined

16. OTHER INFORMATION

**Revision Date** 2024/09/28

**Further information** 

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 Agen-

cy, 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 yyyy/mm/dd

Full text of other abbreviations

**ACGIH** USA. ACGIH Threshold Limit Values (TLV)

**CN OEL** Occupational exposure limits for hazardous agents in the

workplace - Chemical hazardous agents.

according to GB/T 16483 and GB/T 17519



# Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 5.0 2024/09/28 1204410-00020 Date of first issue: 2017/01/09

ACGIH / TWA : 8-hour, time-weighted average

CN OEL / PC-TWA : Permissible concentration - 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 Recommendations on the Transport of Dangerous Goods: vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

#### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

CN / EN