SAFETY DATA SHEET

Pirimiphos-Methyl / Lambda-Cyhalothrin Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 18.09.2023
5.0	06.07.2024	1204433-00019	Date of first issue: 09.01.2017

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

Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD
20 Spartan Road
1619 Spartan, South Africa

Telephone : +27119239300

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

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

		Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1.000 M-Factor (Chronic aquatic toxicity): 100	
lambda-cyhalothrin (ISO)	91465-08-6 415-130-7 607-252-00-6	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Eye 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	>= 2,5 - < 10

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 meth- : Use extinguishing measures that are appropriate to local cir-

ods

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.

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 : 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.

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
Self-reactive substances and mixtures
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

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Polyvinyl chloride	9002-86-2	OEL-RL (respirable dust fraction)	2 mg/m3	ZA OEL
	Further information: Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
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

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/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.
Hand protection		
Material	:	Chemical-resistant gloves
Remarks	:	Consider double gloving.
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.
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 (P)

SECTION 9: Physical and chemical properties

9.1 Information on basic 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

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.

9.2 Other information

Flammability (liquids)	:	No data available
Molecular weight	:	No data available
Particle size	:	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.

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 toxicological effects

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

lambda-cyhalothrin (ISO):

Acute oral toxicity : LD50 (Rat): 56 - 79 mg/kg

LD50 (Mouse): 20 mg/kg

Acute inhalation toxicity	:	LC50 (Rat): 0,06 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rat): 632 - 696 mg/kg
Acute toxicity (other routes of administration)	:	LD50 (Rat): 250 - 750 mg/kg Application Route: Intraperitoneal

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 Species: Mouse Cell type: Bone marrow Application Route: Intraperitoneal Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Pirimiphos-methyl (ISO):

Species	:	Rat
Application Route	:	Oral
Exposure time	:	2 Years
Result	:	negative

Species	:	Mouse
Application Route	:	Oral
Exposure time	:	80 weeks
Result	:	negative

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

lambda-cyhalothrin (ISO):

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
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

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.

Experience with human exposure

Components:

Pirimiphos-methyl (ISO):

Ingestion	:	Symptoms: Nausea, Vomiting, Dizziness, confusion, Headache, Weakness, stomach discomfort, Blurred vision, muscle twitching

lambda-cyhalothrin (ISO):

Inhalation	:	Symptoms: Cough, Local irritation, sneezing
Skin contact	:	Symptoms: Skin irritation, tingling, superficial burning sensation, Local irritation Remarks: Can be absorbed through skin.
Eye contact	:	Symptoms: Eye irritation
Ingestion	:	Symptoms: Gastrointestinal disturbance

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 (Oncorhynchus mykiss (rainbow trout)): 0,00019 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials LC50 (Lepomis macrochirus (Bluegill sunfish)): 0,00021 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0,00004 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
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	:	10.000

toxicity)

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 environmental compartments	:	log Koc: 5,5

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. Do not dispose of waste into sewer.
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

ADN	:	UN 2811
ADR	:	UN 2811
RID	:	UN 2811
IMDG	:	UN 2811
IATA	:	UN 2811

14.2 UN proper shipping name

ADN	:	TOXIC SOLID, ORGANIC, N.O.S. (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))
ADR	:	TOXIC SOLID, ORGANIC, N.O.S. (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))
RID	:	TOXIC SOLID, ORGANIC, N.O.S. (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))
IMDG	:	TOXIC SOLID, ORGANIC, N.O.S. (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))
IATA	:	Toxic solid, organic, n.o.s. (lambda-cyhalothrin (ISO), Pirimiphos-methyl (ISO))

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADN	:	6.1	
ADR	:	6.1	
RID	:	6.1	
IMDG	:	6.1	
IATA	:	6.1	

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

14.5 Environmental hazards

ADN

Environmentally hazardous	:	yes

ADR

Environmentally hazardous	:	yes

RID

Environmentally hazardous	:	yes

IMDG

Marine pollutant	:	yes

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 Transport in bulk according to Annex II of Marpol and the IBC Code

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

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
ZA OEL	:	South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits
ZA OEL / OEL-RL	:	Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - 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 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; 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

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 Agency, http://echa.europa.eu/

Classification of the mixture:		**Classification procedure:**
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

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