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

1.1 Product identifier

Product name BOMBEX™ LAMBDA 10 CS

Other means of identification

Product code 50002399

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub- : Insecticide

stance/Mixture

Recommended restrictions

on use

: Use as recommended by the label.

1.3 Details of the supplier of the safety data sheet

<u>Supplier Address</u> FMC CHEMICALS (PTY) LTD

COMPANY REGISTRATION NUMBER: 1988/001451/07

WEST END OFFICE PARK, BUILDING C CNR. WEST AVE & HALL STREET

CENTURION, 0014 SOUTH AFRICA

E-mail address: SDS-Info@fmc.com .

1.4 Emergency telephone

For leak, fire, spill or accident emergencies, call: South Africa: 0-800-983-611 (CHEMTREC)

Medical emergency:

For any emergency or poisoning contact: Griffon Poison Infor-

mation Centre (24 hrs) - +27-(0)-82-446-8946

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 4 H332: Harmful if inhaled.

Short-term (acute) aquatic hazard, Cate- H400: Very toxic to aquatic life.

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gory 1

2.2 Label elements

Long-term (chronic) aquatic hazard, Cat-

egory 1

effects.

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal Word Warning

Hazard Statements H302 + H332 Harmful if swallowed or if inhaled.

H410 Very toxic to aquatic life with long lasting effects.

H410: Very toxic to aquatic life with long lasting

Precautionary Statements Prevention:

> P261 Avoid breathing mist or vapors. P264 Wash skin thoroughly after handling.

Response:

IF SWALLOWED: Call a POISON P301 + P312 + P330 CENTER or doctor/ physician if you feel unwell. Rinse mouth. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON

CENTER/ doctor if you feel unwell.

P391 Collect spillage.

Disposal:

Dispose of contents/container as hazardous waste in

accordance with local regulations.

Hazardous ingredients which must be listed on the label:

lambda-cyhalothrin (ISO)

Additional Labeling

To avoid risks to human health and the environment, comply with the instruc-EUH401

tions for use.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration
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	EC-No. Index-No. Registration number		(% w/w)
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 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
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5 265-198-5 649-424-00-3	Asp. Tox. 1; H304	>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice : Move out of dangerous area.

Show this safety data sheet to the doctor in attendance.

Do not leave the victim unattended.

If inhaled : Remove to fresh air.

If unconscious, place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

In case of skin contact : If on clothes, remove clothes.

If on skin, rinse well with water.

Wash off with soap and plenty of water.

Get medical attention if irritation develops and persists.

In case of eye contact : Flush eyes with water as a precaution.

Remove contact lenses. Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician. Take victim immediately to hospital.

Do not induce vomiting without medical advice.

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4.2 Most important symptoms and effects, both acute and delayed

Symptoms : On contact, lambda-cyhalothrin can cause feelings of burning,

tingling or numbness in exposed areas (paraesthesia), which is harmless at low exposure, but can be quite painful, especially in the eye. The effect may result from splash, aerosol or transfer from contaminated gloves. The effect is transient, lasting up to 24 hours, but may in exceptional cases last longer. It may be considered as a warning that overexposure has

occurred and that work practice should be reviewed.

Risks : Harmful if swallowed or if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

If any sign of poisoning occurs, call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to a pyrethroid insecticide. Describe his/her condition and the extent of exposure. Immediately remove the exposed

person from the area where the product is present.

As soon as a feeling of tingling is noted in any skin area it is recommended to immediately apply lidocaine or a vitamin E cream. For this purpose, lidocaine or vitamin E cream should

be available at the workplace.

A specific antidote against this substance is not known. Gastric lavage and administration of activated charcoal can be

considered. Normally recovery is spontaneous.

If allowed to penetrate the skin, lambda-cyhalothrin may cause an irritation similar to sunburn. The substance will be drawn into a non-polar environment such as a fat based oil or cream. Vitamin E cream has been reported to be beneficial. Water is highly polar and will not decrease, but may prolong

the irritation. Hot water may increase the pain.

For eye contamination, instillation of local anaesthetic can be

considered.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing

media

High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire

fighting

Do not allow run-off from fire fighting to enter drains or water

courses.

Hazardous combustion prod: :

ucts

Thermal decomposition can lead to release of irritating gases

and vapors.

Carbon oxides

Fluorinated compounds

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Halogenated compounds Nitrogen oxides (NOx)

Ammonia Sulfur oxides Sulphuric acid

5.3 Advice for firefighters

Special protective equipment :

for fire-fighters

Firefighters should wear protective clothing and self-contained

breathing apparatus.

Specific extinguishing meth-

ods

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

SO.

Use a water spray to cool fully closed containers.

Further information : Standard procedure for chemical fires.

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

If it can be safely done, stop the leak.

Do not touch or walk through the spilled material. Keep people away from and upwind of spill/leak.

Remove all sources of ignition.

Immediately evacuate personnel to safe areas.

Ensure adequate ventilation.

Never return spills in original containers for re-use.

Mark the contaminated area with signs and prevent access to

unauthorized personnel.

Only qualified personnel equipped with suitable protective

equipment may intervene.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform

respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

Keep in suitable, closed containers for disposal.

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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

Advice on safe handling : Avoid formation of aerosol.

Do not breathe vapors/dust.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the ap-

plication area.

Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national

regulations.

Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being

used.

Advice on protection against

fire and explosion

Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice. Avoid contact with skin,

eyes and clothing. Do not inhale aerosol.

When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must

comply with the technological safety standards.

Further information on stor-

age conditions

: The product is stable under normal conditions of warehouse storage. Protect from frost, fire, heat and direct sunlight. Store

in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. A warning sign reading "POISON" is recommended. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available. Storage of mixtures of the product with other products can increase toxicity because of extraction of the active ingredient from the capsules.

Further information on stor-

age stability

No decomposition if stored and applied as directed.

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7.3 Specific end use(s)

Specific use(s) : Registered pesticide to be used in accordance with a label

approved by country-specific regulatory authorities.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of expo-	Potential health ef-	Value
Substance name	Liid OSE	·		Value
		sure	fects	
propane-1,2-diol	Workers	Inhalation	Long-term systemic	168 mg/m3
			effects	
	Workers	Inhalation	Long-term local ef-	10 mg/m3
			fects	3
	Consumers	Inhalation	Long-term systemic	50 mg/m3
			effects	J
	Consumers	Inhalation	Long-term local ef-	10 mg/m3
			fects	
ammonium sulphate	Workers	Inhalation	Long-term systemic	11.167 mg/m3
'			effects	
	Workers	Dermal	Long-term systemic	44.667 mg/kg
			effects	
	Consumers	Inhalation	Long-term systemic	1.667 mg/m3
			effects	
	Consumers	Dermal	Long-term systemic	12.8 mg/kg
			effects	
	Consumers	Oral	Long-term systemic	6.4 mg/kg
			effects	

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
propane-1,2-diol	Fresh water	260 mg/l
	Intermittent use/release	183 mg/l
	Sea water	26 mg/l
	Sewage treatment plant	20 g/l
	Fresh water sediment	572 mg/kg
	Sea sediment	57.2 mg/kg
	Soil	50 mg/kg
ammonium sulphate	Fresh water	0.312 mg/l
	Sea water	0.0312 mg/l
	Sewage treatment plant	16.18 mg/l
	Fresh water sediment	0.063 mg/kg
	Soil	62.6 mg/kg
	Intermittent use (freshwater)	0.530 mg/l

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water

Tightly fitting safety goggles

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Hand protection

Material : Wear chemical resistant gloves, such as barrier laminate,

butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed

with the producers of the protective gloves.

Skin and body protection : Impervious clothing

Choose body protection according to the amount and concen-

tration of the dangerous substance at the work place.

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable per-

sonal respiratory protection and protective suit.

Protective measures : Plan first aid action before beginning work with this product.

Always have on hand a first-aid kit, together with proper in-

structions.

Wear suitable protective equipment. When using do not eat, drink or smoke.

In the context of professional plant protection use as recommended, the end user must refer to the label and the instruc-

tions for use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid

Color : beige

Odor : slight, aromatic

Odor Threshold : not determined

pH : ca. 5.5

Concentration: 1 %

Melting point/freezing point : not determined

Boiling point/boiling range : 104 °C

Flash point : Not determined, but expected to be > 100°C if any

Upper explosion limit / Upper

flammability limit

not determined

Lower explosion limit / Lower

flammability limit

not determined

Vapor pressure : 0.0000002 Pa (20 °C)

0.0002 Pa (60 °C)

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0.0008 Pa (70 °C)

Relative vapor density : not determined

Density : 1.06 g/cm3

Solubility(ies)

Water solubility : 0.005 mg/l dispersible (20 °C)

pH: 6.5

Solubility in other solvents : > 500 g/l

(21 °C)

Solvent: hexane

> 500 g/l (21 °C)

Solvent: Toluene

> 500 g/l (21 °C)

Solvent: ethyl acetate

Partition coefficient: n-

octanol/water

log Pow: 7

Autoignition temperature : not determined

Decomposition temperature : not determined

Viscosity

Viscosity, kinematic : ca. 142 mm2/s

9.2 Other information

Flammability (liquids) : Based on available information, the classification criteria for

flammability hazard are not met., may be ignitable

Particle size : Not applicable

Particle Size Distribution : Not applicable

Self-ignition : not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Lambda-cyhalothrin decomposes on heating. Direct local heating such as electric heating or by steam must be

avoided.

10.3 Possibility of hazardous reactions

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Hazardous reactions : No decomposition if stored and applied as directed.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

Avoid formation of aerosol.

10.5 Incompatible materials

Materials to avoid : Avoid strong acids, bases, and oxidizers.

10.6 Hazardous decomposition products

Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity : LD50 (Rat): > 300 - 2,000 mg/kg

Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat): 2.78 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Components:

lambda-cyhalothrin (ISO):

Acute oral toxicity : LD50 (Rat, male): 79 mg/kg

LD50 (Rat, female): 56 mg/kg

Acute toxicity estimate: 56 mg/kg

Method: ATE value derived from LD50/LC50 value

Acute inhalation toxicity : LC50 (Rat): 0.06 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute toxicity estimate: 0.06 mg/l Test atmosphere: dust/mist

Method: ATE value derived from LD50/LC50 value

Acute dermal toxicity : LD50 (Rat, male): 632 mg/kg

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LD50 (Rat, female): 696 mg/kg

Acute toxicity estimate: 632 mg/kg

Method: ATE value derived from LD50/LC50 value

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Method: OECD Test Guideline 401

Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 4.688 mg/l

Exposure time: 4 h
Test atmosphere: vapor

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Skin corrosion/irritation

Not classified based on available information.

Product:

Assessment : No skin irritation

Method : OECD Test Guideline 404

Result : No skin irritation

Components:

lambda-cyhalothrin (ISO):

Assessment : Not classified as irritant
Method : OECD Test Guideline 404

Result : No skin irritation

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Species : Rabbit

Assessment : Repeated exposure may cause skin dryness or cracking.

Result : No skin irritation

Remarks : Minimal effects that do not meet the threshold for classifica-

tion.

Based on data from similar materials

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Assessment : Not classified as irritant
Method : OECD Test Guideline 405

Result : No eye irritation

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Components:

lambda-cyhalothrin (ISO):

Assessment No eye irritation

Method **OECD Test Guideline 405** Remarks May cause mild irritation.

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Species Rabbit

Assessment No eye irritation

Remarks Minimal effects that do not meet the threshold for classifica-

Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Assessment Did not cause sensitization on laboratory animals.

Method **OECD Test Guideline 406** Result Not a skin sensitizer.

Components:

lambda-cyhalothrin (ISO):

Assessment Not a skin sensitizer. Method **OECD Test Guideline 406** Result Not a skin sensitizer.

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Test Type **Maximization Test**

Species Guinea pig

Not a skin sensitizer. Result

Remarks Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Product:

Germ cell mutagenicity- As- : Contains no ingredient listed as a mutagen

sessment

Components:

lambda-cyhalothrin (ISO):

Germ cell mutagenicity- As-

: Based on available data, the classification criteria are not met.

sessment

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Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Genotoxicity in vitro : Test Type: reverse mutation assay

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Bone marrow chromosome aberration.

Species: Rat

Application Route: inhalation (vapor)

Result: negative

Carcinogenicity

Not classified based on available information.

Product:

Carcinogenicity - Assess-

ment

: Contains no ingredient listed as a carcinogen

Components:

lambda-cyhalothrin (ISO):

Carcinogenicity - Assess-

ment

: Based on available data, the classification criteria are not met.

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Species : Rat, male and female
Application Route : inhalation (vapor)
Exposure time : 12 month(s)
NOAEC : 1.8 mg/l
Result : negative

Remarks : Based on data from similar materials

Carcinogenicity - Assess-

ment

: Not classifiable as a human carcinogen.

Reproductive toxicity

Not classified based on available information.

Product:

Reproductive toxicity - As-

sessment

: Contains no ingredient listed as toxic to reproduction

Components:

lambda-cyhalothrin (ISO):

Reproductive toxicity - As-

sessment

: Based on available data, the classification criteria are not met.

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STOT-single exposure

Not classified based on available information.

Product:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

Components:

lambda-cyhalothrin (ISO):

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

STOT-repeated exposure

Not classified based on available information.

Product:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

Components:

lambda-cyhalothrin (ISO):

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Species : Rat, male and female

NOAEC : 0.9 - 1.8 mg/l Application Route : inhalation (vapor)

Exposure time : 12 months

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

lambda-cyhalothrin (ISO):

No aspiration toxicity classification

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

May be fatal if swallowed and enters airways.

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Experience with human exposure

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Skin contact : Symptoms: Repeated exposure may cause skin dryness or

cracking.

Further information

Product:

Remarks : This product contains microencapsulated active ingredients.

The toxicity of encapsulated substances is always lower than that of the substances themselves. It approaches the toxicity of the substances only in cases where grinding actions break

up the capsules, thus freeing the active ingredients.

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Remarks : Vapour concentrations above recommended exposure levels

are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 15.1 µ/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 43 μg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Desmodesmus subspicatus (green algae)): 23.84 mg/l

Exposure time: 96 h

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:

lambda-cyhalothrin (ISO):

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Toxicity to fish : LC50 (Salmo gairdneri): 0.24 µg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Daphnia magna (Water flea)): 0.36 µg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EC50 (Selenastrum capricornutum (green algae)): > 0.3 mg/l

Exposure time: 96 h

M-Factor (Acute aquatic tox-

icity)

10,000

Toxicity to fish (Chronic tox-

icity)

NOEC: 0.25 µg/l Exposure time: 28 d

Species: Cyprinodon variegatus (sheepshead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

NOEC: 0.002 µg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic

toxicity)

10,000

Toxicity to soil dwelling or-

ganisms

LC50: > 1,000 mg/kg Exposure time: 14 d

Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organ-

isms

LD50: > 3,950 mg/kg

Species: Anas platyrhynchos (Mallard duck)

LC50: 0.038 µg/bee Exposure time: 48 h

End point: Acute contact toxicity Species: Apis mellifera (bees)

LC50: 0.909 µg/bee Exposure time: 48 h

End point: Acute oral toxicity Species: Apis mellifera (bees)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EL50 (Daphnia magna (Water flea)): 1.4 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

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Toxicity to algae/aquatic

plants

: EL50 (Pseudokirchneriella subcapitata (green algae)): 1 - 3

mg/l

Exposure time: 24 h

Method: OECD Test Guideline 201

Toxicity to microorganisms : LL50 (Tetrahymena pyriformis): 677.9 mg/l

Exposure time: 72 h

Test Type: Growth inhibition

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

EL50: 0.89 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data is available on the product itself.

Product contains minor amounts of not readily biodegradable components, which may not be degradable in waste water

treatment plants.

Components:

lambda-cyhalothrin (ISO):

Biodegradability : Remarks: Not readily biodegradable.

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 58.6 % Exposure time: 28 d

Method: OECD Test Guideline 301F

Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data is available on the product itself.

Components:

lambda-cyhalothrin (ISO):

Bioaccumulation : Remarks: Low potential for bioaccumulation

Partition coefficient: n-

octanol/water

log Pow: 6.8

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Bioaccumulation : Remarks: The product/substance has a potential to bioaccu-

mulate.

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Partition coefficient: noctanol/water log Pow: 3.72 Method: QSAR

12.4 Mobility in soil

Product:

Distribution among environ- : Medium: Soil

mental compartments Remarks: No data is available on the product itself.

Components:

lambda-cyhalothrin (ISO):

Distribution among environmental compartments

Medium: Soil Remarks: immobile

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Distribution among environ-

mental compartments

Remarks: Expected to partition to sediment and wastewater

solids. Moderately volatile.

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 poten-

tial

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.

Additional ecological infor-

mation

An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with chemi-

cal or used container.

Send to a licensed waste management company.

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Contaminated packaging : Empty remaining contents.

Do not re-use empty containers.

Packaging that is not properly emptied must be disposed of as

the unused product.

Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

UNRTDG : UN 3082
 IMDG : UN 3082
 IATA : UN 3082

14.2 UN proper shipping name

UNRTDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(lambda-cyhalothrin)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(lambda-cyhalothrin)

IATA : Environmentally hazardous substance, liquid, n.o.s.

(lambda-cyhalothrin)

14.3 Transport hazard class(es)

 UNRTDG
 : 9

 IMDG
 : 9

 IATA
 : 9

14.4 Packing group

UNRTDG

Packing group : III Labels : 9

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA (Cargo)

Packing instruction (cargo :

: 964

aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passen: 964

ger aircraft)

Packing instruction (LQ) : Y964

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Packing group : III

Labels : Miscellaneous

14.5 Environmental hazards

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : 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

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 ingredients of this product are reported in the following inventories:

TCSI : Not in compliance with the inventory

TSCA : Product contains substance(s) not listed on TSCA inventory.

AIIC : Not in compliance with the inventory

DSL : This product contains the following components that are not

on the Canadian DSL nor NDSL.

lambda-cyhalothrin (ISO) Silicone oil emulsion

sepiolite

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

NZIoC : Not in compliance with the inventory

TECI: Not in compliance with the inventory

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15.2 Chemical Safety Assessment

A chemical safety assessment is not required for this product (mixture).

SECTION 16: Other information

Full text of H-Statements

H301 : Toxic if swallowed.

H304 : May be fatal if swallowed and enters airways.

H311 : Toxic in contact with skin.

H330 : Fatal if inhaled.

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.

EUH066 : Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard

Asp. Tox. : Aspiration hazard

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

Other information :

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Classification of the mixture: Classification procedure:

Acute Tox. 4	H302	Based on product data or assessment
Acute Tox. 4	H332	Based on product data or assessment
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

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