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

1.1 Product identifier

Product name LAIDIR® 10 CS

Other means of identification

Product code 50002555

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 Agro Limited

Rectors Lane, Pentre

Flintshire CH5 2DH United Kingdom

Telephone: + 44 1244 537370 E-mail address: SDS-Info@fmc.com .

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call: England and Wales: 44-870-8200418 (CHEMTREC)

Medical emergency: England and Wales: 111 Scotland: 84 54 24 2424

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Acute toxicity, Category 4 H302: Harmful if swallowed.

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Acute toxicity, Category 4 H332: Harmful if inhaled.

Short-term (acute) aquatic hazard, Cate-

gory 1

H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, Cat-

egory 1

H410: Very toxic to aquatic life with long lasting

effects.

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

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.

Precautionary statements : Prevention:

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

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON 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:

P501 Dispose of contents/container as hazardous waste in

accordance with local regulations.

Hazardous components which must be listed on the label:

lambda-cyhalothrin (ISO)

**Additional Labelling** 

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

tions for use.

For special phrases (SP) and safety intervals, consult the label.

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#### 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)	
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	
Substances with a workplace exposure limit :				
propane-1,2-diol	57-55-6 200-338-0		>= 20 - < 30	

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.

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Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.

If inhaled : Remove to fresh air.

If unconscious, place in recovery position and seek medical

advice.

If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambu-

lance.

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.

Take victim immediately to hospital.

Do not induce vomiting without medical advice.

## 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

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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.

Immediate medical attention is required in case of ingestion.

## **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media

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

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Unsuitable extinguishing

media

Do not spread spilled material with high-pressure water

streams.

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

Fire may produce irritating, corrosive and/or toxic gases.

Carbon oxides

Fluorinated compounds Halogenated compounds Nitrogen oxides (NOx)

Ammonia Sulphur oxides Sulphuric acid

#### 5.3 Advice for firefighters

Special protective equipment :

for firefighters

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.

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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 : Evacuate personnel to safe areas.

Use personal protective equipment. If it can be safely done, stop the leak.

Do not touch or walk through the spilled material. 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.

# 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 vapours/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.

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Persons susceptible to skin sensitisation 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.

#### 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

## **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
propane-1,2-diol	57-55-6	TWA (Total va-	150 ppm	GB EH40

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pour and parti- cles)	474 mg/m3	
TWA (particles)	10 mg/m3	GB EH40

#### **Derived No Effect Level (DNEL)**

Substance name	End Use	Exposure routes	Potential health effects	Value
ammonium sulphate	Workers	Inhalation	Long-term systemic effects	11.167 mg/m3
	Workers	Dermal	Long-term systemic effects	44.667 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1.667 mg/m3
	Consumers	Dermal	Long-term systemic effects	12.8 mg/kg
	Consumers	Oral	Long-term systemic effects	6.4 mg/kg

#### **Predicted No Effect Concentration (PNEC)**

Substance name	Environmental Compartment	Value
ammonium sulphate	Fresh water	0.312 mg/l
	Marine 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	

#### 8.2 Exposure controls

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water

Tightly fitting safety goggles

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.

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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 Colour : beige

Odour : slight, aromatic
Odour Threshold : not determined

pH : 5.5

Concentration: 1 %

not determined

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

Lower explosion limit / Lower : not determined

flammability limit

Vapour pressure : 0.0000002 Pa (20 °C)

0.0002 Pa (60 °C)

0.0008 Pa (70 °C)

Relative vapour 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

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not determined

Auto-ignition temperature Decomposition temperature

Viscosity

not determined

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 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

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.

Heating of the product will produce harmful and irritant va-

pours.

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

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

Exposure time: 4 h

Test atmosphere: dust/mist

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

LD50 (Rat, female): 696 mg/kg

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: vapour

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

propane-1,2-diol:

Acute oral toxicity : LD50 (Rat, male and female): 22,000 mg/kg

Acute inhalation toxicity : LC0 (Rabbit): 31.7 mg/l

Exposure time: 2 h Test atmosphere: vapour Remarks: no mortality

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

Assessment: The substance or mixture has no acute dermal

toxicity

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## 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

propane-1,2-diol:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

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

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

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

tion.

Based on data from similar materials

propane-1,2-diol:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

## Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

Not classified based on available information.

**Product:** 

Assessment : Did not cause sensitisation 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 : Maximisation Test

Species : Guinea pig

Result : Not a skin sensitizer.

Remarks : Based on data from similar materials

propane-1,2-diol:

Test Type : Maximisation Test
Species : Guinea pig
Result : negative

# Germ cell mutagenicity

Not classified based on available information.

**Product:** 

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

sessment

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#### **Components:**

lambda-cyhalothrin (ISO):

Germ cell mutagenicity- As-

sessment

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

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 (vapour)

Result: negative

propane-1,2-diol:

Genotoxicity in vitro : Test Type: reverse mutation assay

Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Mouse 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 (vapour) Exposure time : 12 month(s)

NOAEC : 1.8 mg/l Result : negative

Remarks : Based on data from similar materials

Carcinogenicity - Assess- : Not classifiable as a human carcinogen.

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ment

propane-1,2-diol:

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

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.

propane-1,2-diol:

Effects on fertility : Test Type: reproductive and developmental toxicity study

Species: Mouse Application Route: Oral Result: negative

Nesuit. negat

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Mouse

Application Route: Oral

Method: OECD Test Guideline 414

Result: Animal testing did not show any effects on fertility.

Remarks: Based on data from similar materials

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.

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## 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 (vapour)

Exposure time : 12 Months

propane-1,2-diol:

Species : Rat, male and female

NOAEL : 1,700 mg/kg

Application Route : Oral Exposure time : 2 Years

Species : Rat, male and female

NOAEL : 1,000 mg/kg LOAEL : 160 mg/kg Application Route : Inhalation Exposure time : 90 Days

**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.

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

Components:

lambda-cyhalothrin (ISO):

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/kgExposure 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.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



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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

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

propane-1,2-diol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

(Mysidopsis bahia (opossum shrimp)): 18,800 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): 34,100

ma/l

Exposure time: 48 h

Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 20,000 mg/l

Exposure time: 18 h

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: 13,020 mg/l Exposure time: 7 d

## 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.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



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**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

propane-1,2-diol:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 23.6 % Exposure time: 64 d

Method: OECD Test Guideline 306

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.

Partition coefficient: n-

octanol/water

log Pow: 3.72 Method: QSAR

propane-1,2-diol:

Partition coefficient: n-

octanol/water

log Pow: -1.07

12.4 Mobility in soil

**Product:** 

Distribution among environ-

mental compartments

Medium: Soil

Remarks: No data is available on the product itself.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



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## **Components:**

lambda-cyhalothrin (ISO):

Distribution among environmental compartments

Medium: Soil Remarks: immobile

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

Distribution among environ-

Remarks: Expected to partition to sediment and wastewater mental compartments

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

This substance/mixture does not contain components considered to have endocrine disrupting properties for environment

according to UK REACH Article 57(f).

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.

Contaminated packaging Empty remaining contents.

Triple rinse containers.

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.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



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## **SECTION 14: Transport information**

#### 14.1 UN number

ADN : UN 3082
ADR : UN 3082
RID : UN 3082
IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

**ADN** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(lambda-cyhalothrin)

**ADR** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(lambda-cyhalothrin)

RID : 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)

Class Subsidiary risks

ADN : 9
ADR : 9
RID : 9
IMDG : 9
IATA : 9

#### 14.4 Packing group

**ADN** 

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

ADR

Packing group : III Classification Code : M6

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



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Hazard Identification Number : 90 Labels : 9 Tunnel restriction code : (-)

RID

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
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
Packing group : III

Labels : Miscellaneous

#### 14.5 Environmental hazards

ADN

Environmentally hazardous : yes

**ADR** 

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

**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.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



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## **SECTION 15: Regulatory information**

# 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17) : Conditions of restriction for the fol-

lowing entries should be considered:

Number on list 3

Solvent naphtha (petroleum), heavy

arom.; Kerosine — unspecified

(Number on list 3)

cyclohexane (Number on list 57, 3) Silicone oil emulsion (Number on list

3)

xylene (Number on list 3)

ethylbenzene (Number on list 3) dibutyltin dilaurate (Number on list

30, 3)

UK REACH Candidate list of substances of very high

concern (SVHC) for Authorisation

Not applicable

The Persistent Organic Pollutants Regulations (retained

Regulation (EU) 2019/1021 as amended for Great Brit-

ain)

Not applicable

Regulation (EU) No 2024/590 on substances that de-

plete the ozone layer

Not applicable

UK REACH List of substances subject to authorisation

(Annex XIV)

Not applicable

Control of Major Accident Hazards Regulations E1

2015 (COMAH)

**ENVIRONMENTAL HAZARDS** 

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Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a)

to (d)

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial and

livestock rearing emissions (integrated pollution prevention

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and control)

Volatile organic compounds (VOC) content: 0.48 %

#### Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the Pregnant Workers Directive 92/85/EEC.

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

#### The components 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

#### 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.

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



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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.

#### 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

GB EH40 : UK. EH40 WEL - Workplace Exposure Limits

GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)

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**

Other information :

Classification of the mixture:

Classification procedure:

Acute Tox. 4 H302 Based on product data or assessment

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



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Acute	Tox. 4	H332	Based on product data or assessment
Aquat	ic Acute 1	H400	Based on product data or assessment
Aquat	ic Chronic 1	H410	Based on product data or assessment

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