## PATROL

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## SECTION 1. IDENTIFICATION

| Product name | $:$ PATROL |
| :--- | :--- |
| Design code. | $:$ A12690A |
| Product Registration number | $: 100-1066$ |

## Manufacturer or supplier's details

Company name of supplier : Syngenta Crop Protection, LLC

| Address $:$ | Post Office Box 18300 |
| :--- | :--- |
|  | Greensboro NC 27419 |
|  | United States of America (USA) |

Telephone : 18003349481
Telefax : 13366322192

E-mail address : sds.requests@syngenta.com
Emergency telephone : 18008888372

Recommended use of the chemical and restrictions on use
Recommended use
: Insecticide

Restrictions on use : General Use Pesticide

## SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Inhalation) : Category 4
Skin sensitization : Category 1

## GHS label elements

Hazard pictograms


Signal Word : Warning
Hazard Statements
: H317 May cause an allergic skin reaction. H332 Harmful if inhaled.

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Precautionary Statements

## Prevention:

P261 Avoid breathing mist or vapors.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves.

## Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

## Other hazards

May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

## Components

| Chemical name | CAS-No. | Concentration (\% w/w) |
| :--- | :--- | :---: |
| lambda-cyhalothrin | $91465-08-6$ | 9.5511 |
| Hydrocarbons, C9, Aromatics | $128601-23-0$ | $>=5-<10$ |
| propane-1,2-diol | $57-55-6$ | $>=1-<5$ |
| orthophosphoric acid | $7664-38-2$ | $>=1-<5$ |
| dioxosilane | $14808-60-7$ | $>=0.1-<1$ |
| $1,2-$ benzisothiazol-3(2H)-one | $2634-33-5$ | $>=0.1-<1$ |

Actual concentration is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

| General advice | Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment. |
| :---: | :---: |
| If inhaled | Take the victim into fresh air. If breathing is irregular or stopped, administer artificial respiration. <br> Keep patient warm and at rest. <br> Call a physician or poison control center immediately. |
| In case of skin contact | Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. |

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|  | Wash contaminated clothing before re-use. |
| :--- | :--- | :--- |
| In case of eye contact | $:$Rinse immediately with plenty of water, also under the eyelids, <br> for at least 15 minutes. <br> Remove contact lenses. <br> Immediate medical attention is required. |
| If swallowed | $:$If swallowed, seek medical advice immediately and show this <br> container or label. <br> Do NOT induce vomiting. |
| Most important symptoms <br> and effects, both acute and <br> delayed | Aspiration may cause pulmonary edema and pneumonitis. <br> Skin contact paresthesia effects (itching, tingling, burning or <br> numbness) are transient, lasting up to 24 hours. |
| Notes to physician | $:$Do not induce vomiting: contains petroleum distillates and/or <br> aromatic solvents. |
| Treat symptomatically. |  |

## SECTION 5. FIRE-FIGHTING MEASURES

| Suitable extinguishing media | Extinguishing media - small fires <br> Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. <br> Extinguishing media - large fires <br> Alcohol-resistant foam <br> or <br> Water spray |
| :---: | :---: |
| Unsuitable extinguishing media | Do not use a solid water stream as it may scatter and spread fire. |
| Specific hazards during fire fighting | As the product contains combustible organic ingredients, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health. |
| Further information | Do not allow run-off from fire fighting to enter drains or water courses. <br> Cool closed containers exposed to fire with water spray. |
| Special protective equipment for fire-fighters | Wear full protective clothing and self-contained breathing apparatus. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : Refer to protective measures listed in sections 7 and 8. tive equipment and emergency procedures

Environmental precautions
: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

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Methods and materials for containment and cleaning up
: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Clean contaminated surface thoroughly.
Clean with detergents. Avoid solvents.
Retain and dispose of contaminated wash water.

## SECTION 7. HANDLING AND STORAGE

Advice on safe handling : No special protective measures against fire required.
Avoid contact with skin and eyes.
When using do not eat, drink or smoke.
For personal protection see section 8.
Conditions for safe storage : No special storage conditions required.
Keep containers tightly closed in a dry, cool and wellventilated place.
Keep out of the reach of children.
Keep away from food, drink and animal feedingstuffs.
Further information on storage stability
: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
| :---: | :---: | :---: | :---: | :---: |
| lambda-cyhalothrin | 91465-08-6 | TWA | $0.04 \mathrm{mg} / \mathrm{m} 3$ (Skin) | Syngenta |
| Hydrocarbons, C9, Aromatics | 128601-23-0 | TWA | $\begin{array}{\|l\|} \hline 19 \mathrm{ppm} \\ 100 \mathrm{mg} / \mathrm{m} 3 \\ \hline \end{array}$ | Supplier |
| propane-1,2-diol | 57-55-6 | TWA | $10 \mathrm{mg} / \mathrm{m} 3$ | US WEEL |
| orthophosphoric acid | 7664-38-2 | TWA | $1 \mathrm{mg} / \mathrm{m} 3$ | ACGIH |
|  |  | STEL | $3 \mathrm{mg} / \mathrm{m} 3$ | ACGIH |
|  |  | TWA | $1 \mathrm{mg} / \mathrm{m} 3$ | NIOSH REL |
|  |  | ST | $3 \mathrm{mg} / \mathrm{m} 3$ | NIOSH REL |
|  |  | TWA | $1 \mathrm{mg} / \mathrm{m} 3$ | OSHA Z-1 |
|  |  | TWA | $1 \mathrm{mg} / \mathrm{m} 3$ | OSHA P0 |
|  |  | STEL | $3 \mathrm{mg} / \mathrm{m} 3$ | OSHA P0 |
| dioxosilane | 14808-60-7 | TWA (respirable) | $\begin{aligned} & \hline 10 \mathrm{mg} / \mathrm{m3} \\ & / \% \mathrm{SiO} 2+2 \end{aligned}$ | OSHA Z-3 |
|  |  | TWA (respirable) | $\begin{aligned} & \hline 250 \mathrm{mppcf} \\ & 1 \% \mathrm{SiO} 2+5 \\ & \hline \end{aligned}$ | OSHA Z-3 |
|  |  | TWA (respirable dust fraction) | $0.1 \mathrm{mg} / \mathrm{m} 3$ | OSHA P0 |
|  |  | TWA (Respirable par- | $\begin{array}{\|l} \hline 0.025 \mathrm{mg} / \mathrm{m3} \\ \text { (Silica) } \\ \hline \end{array}$ | ACGIH |

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|  |  | ticulate mat- <br> ter) |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  | TWA (Res- <br> pirable dust) | $0.05 \mathrm{mg} / \mathrm{m} 3$ <br> (Silica) | NIOSH REL |
|  |  | TWA (Res- <br> pirable dust) | $0.05 \mathrm{mg} / \mathrm{m3}$ | OSHA Z-1 |
| Engineering measures | THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE |  |  |  |
|  | CONTROLS/PERSONAL PROTECTION ARE INTENDED |  |  |  |
|  | FOR THE MANUFACTURE, FORMULATION AND |  |  |  |
|  | PACKAGING OF THE PRODUCT. FOR COMMERCIAL |  |  |  |
|  | APPLICATIONS AND/OR ON-FARM APPLICATIONS |  |  |  |
|  | CONSULT THE PRODUCT LABEL. |  |  |  |

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.
The extent of these protection measures depends on the actual risks in use.
Maintain air concentrations below occupational exposure standards.
Where necessary, seek additional occupational hygiene advice.

## Personal protective equipment

| Respiratory protection | Where concentrations are above recommended limits or are <br> unknown, appropriate respiratory protection should be worn. <br> Follow OSHA respirator regulations (29 CFR 1910.134) and |
| :--- | :--- |
| use NIOSH/MSHA approved respirators. Protection provided |  |
| by air purifying respirators against exposure to any |  |
| hazardous chemical is limited. Use a positive pressure air |  |
| supplied respirator if there is any potential for uncontrolled |  |
| release, exposure levels are unknown, or any other |  |
| circumstance where air purifying respirators may not provide |  |
| adequate protection. |  |

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concentration and amount of dangerous substances, and to the specific work-place.
Remove and wash contaminated clothing before re-use.
Wear as appropriate:
Impervious clothing
Protective measures : The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : white to light brown

Odor : aromatic, like solvent

Odor Threshold : No data available
$\mathrm{pH} \quad: 4-8$ Concentration: $1 \% \mathrm{w} / \mathrm{v}$

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : Method: Pensky-Martens closed cup does not flash

Evaporation rate : No data available
Flammability (solid, gas) : No data available
Upper explosion limit / Upper : No data available flammability limit

Lower explosion limit / Lower : No data available flammability limit

Vapor pressure : No data available
Relative vapor density : No data available
Density : $1.047 \mathrm{~g} / \mathrm{cm} 3$
Solubility(ies)
Water solubility : completely miscible

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| Partition coefficient: n- <br> octanol/water | $:$ No data available |
| :--- | :--- |
| Autoignition temperature | $: 1175{ }^{\circ} \mathrm{F} / 635{ }^{\circ} \mathrm{C}$ |
| Decomposition temperature | $:$ No data available |
| Viscosity <br> Viscosity, dynamic | $: 79.5-448 \mathrm{mPa} . \mathrm{s}\left(68{ }^{\circ} \mathrm{F} / 20^{\circ} \mathrm{C}\right)$ |
|  | $: 58.1-334 \mathrm{mPa.s}\left(104{ }^{\circ} \mathrm{F} / 40^{\circ} \mathrm{C}\right)$ |
| $\quad$ Viscosity, kinematic | $:$ No data available |
| Explosive properties | $:$ Not explosive |
| Oxidizing properties | $:$ No data available |

## SECTION 10. STABILITY AND REACTIVITY

| Reactivity | $:$ None reasonably foreseeable. |
| :--- | :--- |
| Chemical stability | $:$ Stable under normal conditions. |
| Possibility of hazardous reac- <br> tions | $:$ No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | $:$ No decomposition if used as directed. |
| Incompatible materials | $:$ None known. |
| Hazardous decomposition <br> products | $:$ No hazardous decomposition products are known. |

## SECTION 11. TOXICOLOGICAL INFORMATION

## Information on likely routes of exposure

Ingestion
Inhalation
Skin contact
Eye contact
Acute toxicity

## Product:

Acute oral toxicity : LD50 (Rat, male and female): $>5,000 \mathrm{mg} / \mathrm{kg}$
Acute inhalation toxicity : LC50 (Rat, male and female): $>4.62 \mathrm{mg} / \mathrm{l}$
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The component/mixture is moderately toxic after

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|  | short term inhalation., The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations. <br> Remarks: Based on data from similar materials |
| :---: | :---: |
| Acute dermal toxicity | LD50 (Rat, male and female): $>4,000 \mathrm{mg} / \mathrm{kg}$ <br> Assessment: The substance or mixture has no acute dermal toxicity |
| Components: |  |
| lambda-cyhalothrin: |  |
| Acute oral toxicity | LD50 (Rat, female): $56 \mathrm{mg} / \mathrm{kg}$ |
| Acute inhalation toxicity | LC50 (Rat, male and female): $0.06 \mathrm{mg} / \mathrm{l}$ Exposure time: 4 h <br> Test atmosphere: dust/mist |
| Acute dermal toxicity | LD50 (Rat, male): $632 \mathrm{mg} / \mathrm{kg}$ |
| Hydrocarbons, C9, Aromatics: |  |
| Acute oral toxicity | LD50 (Rat, female): $3,492 \mathrm{mg} / \mathrm{kg}$ |
| orthophosphoric acid: |  |
| Acute oral toxicity | LD50 (Rat): $301 \mathrm{mg} / \mathrm{kg}$ |
| Acute dermal toxicity | LD50 (Rabbit): $2,750 \mathrm{mg} / \mathrm{kg}$ |
| 1,2-benzisothiazol-3(2H)-one: |  |
| Acute oral toxicity | LD50 (Rat, male): $670 \mathrm{mg} / \mathrm{kg}$ |
| Acute dermal toxicity | LD50 (Rat, male and female): $>2,000 \mathrm{mg} / \mathrm{kg}$ <br> Assessment: The substance or mixture has no acute derma toxicity |

## Skin corrosion/irritation

## Product:

| Species | $:$ Rabbit |
| :--- | :--- |
| Result | $:$ No skin irritation |
| Remarks | $:$ May cause temporary itching, tingling, burning or numbness of |
|  |  |
|  | exposed skin, called paresthesia. |

## Components:

lambda-cyhalothrin:

| Species | $:$ Rabbit |  |
| :--- | :--- | :--- |
| Result | $:$ No skin irritation |  |
| Remarks | $:$ May cause temporary itching, tingling, burning or numbness of |  |
|  |  | exposed skin, called paresthesia. |

Hydrocarbons, C9, Aromatics:

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| Result | $:$ Repeated exposure may cause skin dryness or cracking. |
| :--- | :--- |
| Species | $:$ Rabbit |
| Result | $:$ Mild skin irritation |

orthophosphoric acid:
Result : Corrosive after 3 minutes to 1 hour of exposure

1,2-benzisothiazol-3(2H)-one:

| Species | $:$ Rabbit |  |
| :--- | :--- | :--- |
| Result | $:$ | Mild skin irritation |

## Serious eye damage/eye irritation

## Product:

| Species | $:$ Rabbit |
| :--- | :--- | :--- |
| Result | $:$ No eye irritation |

## Components:

## lambda-cyhalothrin:

| Species | $:$ Rabbit |
| :--- | :--- |
| Result | $:$ No eye irritation |

1,2-benzisothiazol-3(2H)-one:

| Species | $:$ Rabbit |
| :--- | :--- | :--- |
| Result | $:$ Risk of serious damage to eyes. |

## Respiratory or skin sensitization

Product:
Test Type : Maximization Test
Species : Guinea pig
Result : Did not cause sensitization on laboratory animals.

| Species | $:$ Humans |
| :--- | :--- |
| Result | $:$ Probability or evidence of skin sensitization in humans |

## Components:

lambda-cyhalothrin:
Test Type : Maximization Test
Species : Guinea pig
Result : Does not cause skin sensitization
Test Type : Local lymph node assay (LLNA)
Species : Mouse
Result : Does not cause skin sensitization.

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## 1,2-benzisothiazol-3(2H)-one:

Result : Probability or evidence of skin sensitization in humans

## Germ cell mutagenicity

## Components:

lambda-cyhalothrin:
Germ cell mutagenicity - : Animal testing did not show any mutagenic effects. Assessment
orthophosphoric acid:
Germ cell mutagenicity - : In vitro tests did not show mutagenic effects Assessment

## 1,2-benzisothiazol-3(2H)-one:

Germ cell mutagenicity - : Weight of evidence does not support classification as a germ Assessment cell mutagen.

## Carcinogenicity

Components:

## lambda-cyhalothrin:

Carcinogenicity - Assess- : Weight of evidence does not support classification as a carment cinogen

## dioxosilane:

Carcinogenicity - Assess- : Weight of evidence does not support classification as a carment
cinogen

IARC has concluded that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources and in experimental animals from quartz and cristobalite (Group 1). It was noted however, that carcinogenicity was not detected in all industrial circumstances and may be dependent on inherent characteristics of the crystalline silica or external factors affecting its biological activity.

IARC No ingredient of this product present at levels greater than or equal to $0.1 \%$ is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to $0.1 \%$ is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to $0.1 \%$ is identified as a known or anticipated carcinogen by NTP.

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## Reproductive toxicity

## Components:

## lambda-cyhalothrin:

Reproductive toxicity - As- : Weight of evidence does not support classification for sessment reproductive toxicity
orthophosphoric acid:
Reproductive toxicity - As- : No toxicity to reproduction sessment

## STOT-single exposure

Components:
lambda-cyhalothrin:
Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

Hydrocarbons, C9, Aromatics:

| Assessment | The substance or mixture is classified as specific target organ <br> toxicant, single exposure, category 3 with narcotic effects., |
| :--- | :--- |
|  | The substance or mixture is classified as specific target organ |
| toxicant, single exposure, category 3 with respiratory tract |  |
| irritation. |  |

## STOT-repeated exposure

## Components:

## lambda-cyhalothrin:

| Assessment | $:$The substance or mixture is not classified as specific target <br> organ toxicant, repeated exposure. |
| :--- | :--- | :--- |
| dioxosilane: |  |
| Routes of exposure $:$ <br> Target Organs $:$ Inhalation <br> Assessment The substance or mixture is classified as specific target organ <br>  toxicant, repeated exposure, category 1. |  |

## Aspiration toxicity

## Components:

## Hydrocarbons, C9, Aromatics:

May be fatal if swallowed and enters airways.

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## SECTION 12. ECOLOGICAL INFORMATION

## Ecotoxicity

Components:
lambda-cyhalothrin:
Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): $0.000078 \mathrm{mg} / \mathrm{l}$ Exposure time: 96 h

LC50 (Ictalurus punctatus (channel catfish)): $0.00016 \mathrm{mg} / \mathrm{l}$
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): $0.00036 \mathrm{mg} / \mathrm{l}$
Exposure time: 48 h
LC50 (Americamysis): $0.000007 \mathrm{mg} / \mathrm{l}$
Exposure time: 48 h
EC50 (Hyalella azteca (Amphipod)): $0.000002 \mathrm{mg} / \mathrm{l}$
Exposure time: 48 h

| Toxicity to algae/aquatic plants | ErC50 (Raphidocelis subcapitata (freshwater green alga)): <br> $0.31 \mathrm{mg} / \mathrm{l}$ <br> Exposure time: 96 h |
| :---: | :---: |
| M-Factor (Acute aquatic toxicity) | 100,000 |
| Toxicity to fish (Chronic toxicity) | NOEC (Pimephales promelas (fathead minnow)): 0.000031 mg/l <br> Exposure time: 300 d |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | NOEC (Daphnia magna (Water flea)): $0.000002 \mathrm{mg} / \mathrm{l}$ Exposure time: 21 d |
|  | NOEC (Americamysis): $0.00022 \mu \mathrm{~g} / \mathrm{l}$ Exposure time: 28 d |
| M-Factor (Chronic aquatic toxicity) | 100,000 |
| Toxicity to microorganisms | EC50 (activated sludge): > $100 \mathrm{mg} / \mathrm{l}$ Exposure time: 3 h |

Hydrocarbons, C9, Aromatics:
Toxicity to fish
LL50 (Oncorhynchus mykiss (rainbow trout)): $9.2 \mathrm{mg} / \mathrm{l}$
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates

EL50 (Daphnia magna (Water flea)): $3.2 \mathrm{mg} / \mathrm{I}$
Exposure time: 48 h
Toxicity to algae/aquatic : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 2.9

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| plants | mg/l |
| :---: | :---: |
|  | Exposure time: 72 h |
|  | NOELR (Raphidocelis subcapitata (freshwater green alga)): $1.0 \mathrm{mg} / \mathrm{l}$ |
|  | End point: Growth rate |
|  | Exposure time: 72 h |
| Toxicity to fish (Chronic toxicity) | NOELR (Oncorhynchus mykiss (rainbow trout)): $1.228 \mathrm{mg} / \mathrm{l}$ Exposure time: 28 d |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | NOELR (Daphnia magna (Water flea)): $2.144 \mathrm{mg} / \mathrm{l}$ Exposure time: 21 d |
| Ecotoxicology Assessment |  |
| Chronic aquatic toxicity | Toxic to aquatic life with long lasting effects. |
| orthophosphoric acid: |  |
| Toxicity to fish | LC50 (Lepomis macrochirus (Bluegill sunfish)): 3-3.25 mg/l Exposure time: 96 h |
| Ecotoxicology Assessment |  |
| Chronic aquatic toxicity | This product has no known ecotoxicological effects. |
| 1,2-benzisothiazol-3(2H)-one: |  |
| Toxicity to fish | LC50 (Oncorhynchus mykiss (rainbow trout)): $2.18 \mathrm{mg} / \mathrm{l}$ Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | EC50 (Daphnia magna (Water flea)): $2.94 \mathrm{mg} / \mathrm{l}$ Exposure time: 48 h |
| Toxicity to algae/aquatic plants | ErC50 (Raphidocelis subcapitata (freshwater green alga)): $0.15 \mathrm{mg} / \mathrm{l}$ <br> Exposure time: 72 h |
|  | EC10 (Raphidocelis subcapitata (freshwater green alga)): 0.04 mg/l |
|  | End point: Growth rate |
|  | Exposure time: 72 h |
| Toxicity to fish (Chronic toxicity) | NOEC (Oncorhynchus mykiss (rainbow trout)): $0.3 \mathrm{mg} / \mathrm{l}$ Exposure time: 28 d |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | NOEC (Daphnia): $1.7 \mathrm{mg} / \mathrm{l}$ Exposure time: 21 d |

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## Persistence and degradability

## Components:

## lambda-cyhalothrin:

Biodegradability : Result: Not readily biodegradable.
Stability in water : Degradation half life (DT50): 7 d Remarks: Product is not persistent.

Hydrocarbons, C9, Aromatics:
Biodegradability : Result: Readily biodegradable.

1,2-benzisothiazol-3(2H)-one:
Biodegradability : Result: rapidly degradable

## Bioaccumulative potential

Components:
lambda-cyhalothrin:
Bioaccumulation : Remarks: Bioaccumulates

1,2-benzisothiazol-3(2H)-one:
Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Mobility in soil
Components:
lambda-cyhalothrin:
Distribution among environ- : Remarks: immobile mental compartments

Stability in soil : Dissipation time: 56 d
Percentage dissipation: 50 \% (DT50)
Remarks: Product is not persistent.

Other adverse effects
Components:
lambda-cyhalothrin:
Results of PBT and vPvB assessment
: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating ( vPvB ).
orthophosphoric acid:
Results of PBT and vPvB : This substance is not considered to be persistent, bioaccumuassessment lating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

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## 1,2-benzisothiazol-3(2H)-one:

Results of PBT and VPvB : This substance is not considered to be persistent, bioaccumuassessment
very persistent and very bioaccumulating (vPvB).

## SECTION 13. DISPOSAL CONSIDERATIONS

## Disposal methods

Waste from residues

Contaminated packaging : Empty remaining contents.
Triple rinse containers.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

```
SECTION 14. TRANSPORT INFORMATION
    International Regulations
    UNRTDG
```

UN number
Proper shipping name

Class
Packing group
Labels
IATA-DGR
UN/ID No.
Proper shipping name

Class
Packing group
Labels
Packing instruction (cargo
aircraft)
Packing instruction (passen-
ger aircraft)
Environmentally hazardous : yes
IMDG-Code
UN number

Class

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LAMBDA-CYHALOTHRIN)
: UN 3082
: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(LAMBDA-CYHALOTHRIN)
: 9
III
9
: UN 3082
: Environmentally hazardous substance, liquid, n.o.s. (LAMBDA-CYHALOTHRIN)
: 9
III
Miscellaneous
: 964

964
: UN 3082

9

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| Packing group | $:$ | III |
| :--- | :--- | :--- |
| Labels | $:$ | 9 |
| EmS Code | $:$ F-A, S-F |  |
| Marine pollutant | $:$ | yes |

## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

## Domestic regulation

## 49 CFR

Not regulated as a dangerous good
Remarks : Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

## Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:
Caution
Harmful if absorbed through skin.
Avoid breathing spray mist.
Avoid contact with skin, eyes or clothing.
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
Remove and wash contaminated clothing before re-use.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

## SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.
SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.
SARA 311/312 Hazards : Acute toxicity (any route of exposure)
Respiratory or skin sensitization
SARA 313
: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

## SECTION 16. OTHER INFORMATION

## Further information

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## NFPA 704:



Special hazard

HMIS® IV:


HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

## Full text of other abbreviations

ACGIH
NIOSH REL
OSHA PO
OSHA Z-1
OSHA Z-3
US WEEL
ACGIH / TWA
ACGIH / STEL
NIOSH REL / TWA
NIOSH REL / ST
OSHA PO / TWA
OSHA PO / STEL
OSHA Z-1 / TWA
OSHA Z-3 / TWA
US WEEL / TWA

USA. ACGIH Threshold Limit Values (TLV)
: USA. NIOSH Recommended Exposure Limits
: USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
: USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
: USA. Workplace Environmental Exposure Levels (WEEL)
: 8-hour, time-weighted average
: Short-term exposure limit
: Time-weighted average concentration for up to a 10 -hour workday during a 40-hour workweek
: STEL-15-minute TWA exposure that should not be exceeded at any time during a workday
: 8-hour time weighted average
: Short-term exposure limit
: 8-hour time weighted average
: 8-hour time weighted average
: 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x\% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with $x \%$ response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x\% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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 Dan-

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gerous 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; 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

Revision Date : 04/04/2023

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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