

SAFETY DATA SHEET

Spotlight® 40 WG



Version	Revision Date:	SDS Number:	Date of last issue: -
2.1	2025/02/28	50000493	Date of first issue: 2020/07/01

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Spotlight® 40 WG

Recommended use of the chemical and restrictions on use

Recommended use : Herbicide

Restrictions on use : Use as recommended by the label.

Manufacturer or supplier's details

Company : FMC Vietnam Company Limited

Address : No.12, Lot B, Thong Nhat Road
Song Than 2 Industrial Zone, Di An Ward
Di An Town, Binh Duong Province
Vietnam

Telephone : +842743790503

Telefax : +842743790501

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

Emergency telephone : For leak, fire, spill or accident emergencies, call:
+(84)-444581938 (CHEMTREC Vietnam)

Medical emergency:
All other countries: +1 651 / 632-6793 (Collect)

2. HAZARDS IDENTIFICATION

GHS Classification

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Hazard pictograms :



Signal Word : WARNING

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

Precautionary Statements : **Prevention:**
P273 Avoid release to the environment.
Response:
P391 Collect spillage.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
carfentrazone-ethyl (ISO)	128639-02-1	>= 36 -< 44
D-Glucopyranose, oligomeric, decyl octyl glycosides	68515-73-1	>= 1,5 -< 2,5

4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material 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 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 ambulance.

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.

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- 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.
Do not induce vomiting without medical advice.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
Avoid inhalation, ingestion and contact with skin and eyes.
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : Treat symptomatically.
Immediate medical attention is required in case of ingestion.
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5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.
- Unsuitable extinguishing media : High volume water jet
Do not spread spilled material with high-pressure water streams.
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Fire may produce irritating, corrosive and/or toxic gases.
Nitrogen oxides (NO_x)
Carbon oxides
Chlorine compounds
Fluorine compounds
- Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Use a water spray to cool fully closed containers.
Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances 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.
- Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.
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6. ACCIDENTAL RELEASE MEASURES

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|---|--|
| Personal precautions, protective equipment and emergency procedures | :
Evacuate personnel to safe areas.
Do not touch or walk through the spilled material.
If it can be safely done, stop the leak.
Ensure adequate ventilation.
Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
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. |
| 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. |
| Methods and materials for containment and cleaning up | :
Keep in suitable, closed containers for disposal. |

7. HANDLING AND STORAGE

- | | |
|---|---|
| Advice on protection against fire and explosion | :
Normal measures for preventive fire protection.

Provide appropriate exhaust ventilation at places where dust is formed. |
| Advice on safe handling | :
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Avoid formation of respirable particles. |
| Conditions for safe storage | :
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.
Electrical installations / working materials must comply with the technological safety standards. |
| Further information on storage conditions | :
The product is stable under normal conditions of warehouse storage.
Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorized persons or children. 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. |
| Further information on storage stability | :
Keep in a dry place.
No decomposition if stored and applied as directed. |

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
carfentrazone-ethyl (ISO)	128639-02-1	TWA (Inhalable particulate matter)	1 mg/m3	ACGIH

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Particulates type

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.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Skin and body protection : Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures : Plan first aid action before beginning work with this product.
Always have on hand a first-aid kit, together with proper instructions.
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 instructions for use.

Hygiene measures : General industrial hygiene practice.
Avoid contact with skin, eyes and clothing.
Do not breathe dust or spray mist.
Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : solid

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Form	:	powder
Color	:	Off-white/tan
Odor	:	Latex smell
Odor Threshold	:	not determined
pH	:	8,63 (23,9 °C) Concentration: 1 %
Melting point/freezing point	:	not determined
Boiling point/boiling range	:	not determined
Flash point	:	not determined
Evaporation rate	:	not determined
Flammability (solid, gas)	:	Not highly flammable
Self-ignition	:	not determined
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Vapor pressure	:	Not available for this mixture.
Relative vapor density	:	not determined
Density	:	0,716 g/cm3 Pour density 0,735 g/cm3 Tap density
Solubility(ies)		
Water solubility	:	dispersible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	Not available for this mixture.

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Autoignition temperature	: No data available
Decomposition temperature	: not determined
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: Non-oxidizing
Particle size	: No data available

10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed. Dust may form explosive mixture in air.
Conditions to avoid	: Avoid extreme temperatures. Avoid dust formation. Heat, flames and sparks. Protect from frost, heat and sunlight. Heating of the product will produce harmful and irritant vapours.
Incompatible materials	: Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	: Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Routes of exposure	: Inhalation
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Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	: LD50 (Rat, female): > 5.000 mg/kg Method: OECD Test Guideline 425
Acute inhalation toxicity	: LC50 (Rat, male and female): > 5,18 mg/l Exposure time: 4 h

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Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: no mortality
Highest attainable concentration.

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402

Components:**carfentrazone-ethyl (ISO):**

Acute oral toxicity : LD50 (Rat, female): 5.143 mg/kg
Method: US EPA Test Guideline OPP 81-1
Symptoms: Tremors
GLP: yes

LD50 (Rat, female): > 5.000 mg/kg
Method: OECD Test Guideline 425
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity
Remarks: no mortality

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,09 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: EPA OPP 81 - 3
Symptoms: Tremors, chromodacryorrhea, nasal discharge
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 4.000 mg/kg
Method: US EPA Test Guideline OPP 81-2
GLP: yes
Assessment: The component/mixture is minimally toxic after single contact with skin.
Remarks: no mortality

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Acute oral toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 423

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Not classified based on available information.

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Product:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	slight irritation

Components:

carfentrazone-ethyl (ISO):

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	US EPA Test Guideline OPP 81-5
Result	:	slight irritation
GLP	:	yes

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species	:	Rabbit
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
Remarks	:	Minimal effects that do not meet the threshold for classification.

Components:

carfentrazone-ethyl (ISO):

Species	:	Rabbit
Result	:	slight irritation
Assessment	:	Not classified as irritant
Method	:	EPA OPP 81-4
GLP	:	yes

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Species	:	Rabbit
Result	:	Irreversible effects on the eye
Method	:	OECD Test Guideline 405
Remarks	:	Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

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Respiratory sensitization

Not classified based on available information.

Product:

Test Type	: Local lymph node assay (LLNA)
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: Does not cause skin sensitization.

Components:

carfentrazone-ethyl (ISO):

Routes of exposure	: Skin contact
Species	: Guinea pig
Method	: US EPA Test Guideline OPP 81-6
Result	: Does not cause skin sensitization.
GLP	: yes

Test Type	: Local lymph node assay (LLNA)
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: Does not cause skin sensitization.
GLP	: yes

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: Does not cause skin sensitization.
Remarks	: Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Components:

carfentrazone-ethyl (ISO):

Genotoxicity in vitro	: Test Type: reverse mutation assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes
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Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: yes
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Test Type: Ames test Metabolic activation: with and without metabolic activation Method: U.S. EPA 84-2
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Date of first issue: 2020/07/01Result: negative
GLP: yesTest Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yesTest Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Result: negative
GLP: yes

Test Type: unscheduled DNA synthesis assay
Species: Rat (male)
Result: negative
GLP: yes

Germ cell mutagenicity - Assessment : No genotoxic potential.

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: negativeTest Type: reverse mutation assay
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male)
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

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

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Carcinogenicity

Not classified based on available information.

Components:

carfentrazone-ethyl (ISO):

Species	: Rat, female
Application Route	: Ingestion
Exposure time	: 2 Years
NOAEL	: 3 mg/kg bw/day
LOAEL	: 12 mg/kg bw/day
Method	: U.S. EPA 83-5
Result	: no increase in tumors observed
Target Organs	: Liver
GLP	: yes

Species	: Mouse, female
Application Route	: Ingestion
Exposure time	: 80 weeks
NOAEL	: 10 mg/kg bw/day
LOAEL	: 110 mg/kg bw/day
Method	: U.S. EPA 83-5
Result	: no increase in tumors observed
Target Organs	: Liver
GLP	: yes

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

Reproductive toxicity

Not classified based on available information.

Components:

carfentrazone-ethyl (ISO):

Effects on fertility : Test Type: Multi-generation study
Species: Rat, male and female
Application Route: Ingestion
Fertility: NOEL: 4.000 ppm
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat, female
Application Route: Oral
General Toxicity Maternal: NOEL: 100 mg/kg bw/day
Embryo-fetal toxicity.: NOEL: 600 mg/kg bw/day
Result: negative

Test Type: Embryo-fetal development
Species: Rabbit, female
Application Route: Oral
General Toxicity Maternal: NOEL: 150 mg/kg bw/day
Embryo-fetal toxicity.: NOEL: > 300 mg/kg bw/day
Result: negative

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Reproductive toxicity - Assessment : Animal testing showed no reproductive toxicity.

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Effects on fertility : Test Type: one-generation reproductive toxicity
Species: Rat, male and female
Application Route: Oral
Dose: 0, 100, 300, 1000 mg/kg bw
General Toxicity Parent: NOAEL: 1.000 mg/kg bw/day
Method: OECD Test Guideline 421
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Species: Rat, females
Application Route: Oral
Dose: 0, 100, 300, 1000 mg/kg bw
General Toxicity Maternal: NOAEL: 1.000 mg/kg bw/day
Developmental Toxicity: NOAEL: 1.000 mg/kg bw/day
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT-single exposure

Not classified based on available information.

Components:

carfentrazone-ethyl (ISO):

Remarks : No significant adverse effects were reported

STOT-repeated exposure

Not classified based on available information.

Components:

carfentrazone-ethyl (ISO):

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

carfentrazone-ethyl (ISO):

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Species	: Mouse, male
NOAEL	: 143 mg/kg
LOAEL	: 571 mg/kg
Application Route	: Oral
Exposure time	: 90 days
Method	: EPA 82-1
GLP	: yes
Target Organs	: Blood, Liver

Species	: Dog, male and female
NOEL	: 150 mg/kg
LOAEL	: 500 mg/kg
Application Route	: Oral
Exposure time	: 90 days
Target Organs	: Blood

Species	: Dog, male and female
NOEL	: 50 mg/kg
NOAEL	: 150 mg/kg
LOAEL	: 500 mg/kg
Application Route	: Oral
Exposure time	: 12 months
GLP	: yes
Target Organs	: Blood

Species	: Rat, male
NOAEL	: 58 mg/kg
Exposure time	: 90 d
Method	: EPA 82-1
GLP	: yes

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Species	: Rat, male and female
NOAEL	: 1000 mg/kg bw/day
Application Route	: Oral
Exposure time	: 90d
Dose	: 0, 250, 500, 1000 mg/kg bw
Remarks	: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Product:

The mixture does not have properties associated with aspiration hazard potential.

Components:

carfentrazone-ethyl (ISO):

The substance does not have properties associated with aspiration hazard potential.

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Neurological effects

Components:**carfentrazone-ethyl (ISO):**

No neurotoxicity observed in animal studies.

Further information

Product:

Remarks : No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:Toxicity to algae/aquatic
plants: NOEC (algae): 0,0063 mg/l
Exposure time: 72 hErC50 (algae): 0,067 mg/l
Exposure time: 72 hNOEC (Lemna gibba (gibbous duckweed)): 0.00158 µg/l
Exposure time: 7 d
Method: OECD Test Guideline 221EC50 (Lemna gibba (gibbous duckweed)): 0.030 µg/l
Exposure time: 7 d
Method: OECD Test Guideline 221Toxicity to soil dwelling or-
ganisms: NOEC (Eisenia fetida (earthworms)): 45,9 mg/kg
Method: OECD Test Guideline 222LC50 (Eisenia fetida (earthworms)): > 45,9 mg/kg
Method: OECD Test Guideline 222Toxicity to terrestrial organ-
isms: LD50 (Apis mellifera (bees)): > 200 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Method: OECD Test Guideline 213**Components:****carfentrazone-ethyl (ISO):**

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): 2,55 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203LC50 (Menidia beryllina (Silverside)): 1,14 mg/l
Exposure time: 96 h

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Test Type: flow-through test

LC50 (*Oncorhynchus mykiss* (rainbow trout)): 1,6 mg/l

Exposure time: 96 h

Test Type: flow-through test

Method: EPA OPP 72-1

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 9,8 mg/l
End point: Immobilization
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility.

Toxicity to algae/aquatic plants : EC50 (*Selenastrum capricornutum* (green algae)): 0,0133 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

NOEC (*Selenastrum capricornutum* (green algae)): 0,00933 mg/l

End point: Growth rate

Exposure time: 72 h

Method: OECD Test Guideline 201

GLP: yes

EbC50 (*Selenastrum capricornutum* (green algae)): 16 µg/l
Exposure time: 120 h

EC50 (*Navicula pelliculosa* (Diatom)): 12 µg/l

Exposure time: 72 h

Test Type: static test

EC50 (*Skeletonema costatum* (Diatom)): 15 µg/l

Exposure time: 72 h

GLP: yes

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC (*Oncorhynchus mykiss* (rainbow trout)): 22 µg/l
Exposure time: 89 d
Test Type: Early Life-Stage
Method: OECD Test Guideline 210
GLP: yes

NOEC (*Oncorhynchus mykiss* (rainbow trout)): 0,118 mg/l

Exposure time: 102 d

Test Type: flow-through test

Method: US EPA Test Guideline OPP 72-4

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia magna* (Water flea)): 0,309 mg/l
End point: Growth
Exposure time: 21 d

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Method: OECD Test Guideline 202

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to microorganisms : NOEC (activated sludge): 1.000 mg/l
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

Toxicity to soil dwelling organisms : NOEC (Eisenia fetida (earthworms)): 820 mg/kg

Method: OECD Test Guideline 216

Remarks: No significant adverse effect on Nitrogen mineralization.

Method: OECD Test Guideline 217

Remarks: No significant adverse effect on Carbon mineralization.

Toxicity to terrestrial organisms : LD50 (Anas platyrhynchos (Mallard duck)): > 5.620 ppm
End point: Acute oral toxicity
Remarks: Dietary

LD50 (Colinus virginianus (Bobwhite quail)): 2.250 mg/kg
End point: Acute oral toxicity

NOEL (Colinus virginianus (Bobwhite quail)): 1000 ppm
End point: Reproduction Test

LD50 (Apis mellifera (bees)): > 200 µg/bee
End point: Acute oral toxicity

LD50 (Apis mellifera (bees)): > 200 µg/bee
End point: Acute contact toxicity

Ecotoxicology Assessment

Toxicity Data on Soil : Harmful to the soil environment.

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Toxicity to fish : LC0 (Danio rerio (zebra fish)): 59,3 mg/l
Exposure time: 96 h
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 21 mg/l
Exposure time: 72 h
Test Type: static test

Toxicity to fish (Chronic tox- : NOEC (Danio rerio (zebra fish)): 1,8 mg/l

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Exposure time: 28 d
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : LOEC (Daphnia magna (Water flea)): 2 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 560 mg/l
Exposure time: 6 h
Test Type: Growth inhibition

Toxicity to soil dwelling organisms : LC0 (Eisenia fetida (earthworms)): >= 654 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207
Remarks: Based on data from similar materials

Persistence and degradability

Components:

carfentrazone-ethyl (ISO):

Biodegradability : Result: Not readily biodegradable.

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Biodegradability : Inoculum: activated sludge, non-adapted
Result: Readily biodegradable.
Method: OECD Test Guideline 301E

Bioaccumulative potential

Product:

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

Components:

carfentrazone-ethyl (ISO):

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 176
Exposure time: 28 d
Method: OECD Test Guideline 305E
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 3,7 (20 °C)

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Partition coefficient: n-octanol/water : log Pow: 1,72 (40 °C)
pH: 6,5

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Remarks: Based on data from similar materials

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: No data is available on the product itself.

Components:

carfentrazone-ethyl (ISO):

Distribution among environmental compartments : Remarks: Mobile in soils

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
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 handling site for recycling or disposal.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	: UN 3077
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Carfentrazone-ethyl)
Class	: 9
Subsidiary risk	: ENVIRONM.
Packing group	: III
Labels	: 9 (ENVIRONM.)

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Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(Carfentrazone-ethyl)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 956
Packing instruction (passenger aircraft) : 956
Environmentally hazardous : yes

IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Carfentrazone-ethyl)
Class : 9
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.

Special precautions for user

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

15. REGULATORY INFORMATION

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

Law on Chemicals No. 06/2007/QH12

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

TCSI : On the inventory, or 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.

ETHYL (RS)-2-CHLORO-3-{2-CHLORO-5-[4-(DIFLUOROMETHYL)-4,5-DIHYDRO-3-METHYL-5-OXO-1H-1,2,4-TRIAZOL-1-YL]-4-FLUOROPHENYL}PROPIONATE

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ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: Not in compliance with the inventory
TECI	: Not in compliance with the inventory

16. OTHER INFORMATION

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Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA	: 8-hour, time-weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Trans-

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portation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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