

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



CARFENTRAZONE-ETHYL 400 G/KG WG

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.04.2024	50000493	Date of first issue: 03.04.2024

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

1.1 Product identifier

Product name CARFENTRAZONE-ETHYL 400 G/KG WG

Other means of identification

Product code 50000493

Unique Formula Identifier (UFI) : 4C9Y-J2R2-KN47-AJ60

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

Use of the Substance/Mixture : Herbicide

Recommended restrictions on use : Use as recommended by the label.
For professional and industrial use only

1.3 Details of the supplier of the safety data sheet

Supplier Address FMC Agricultural Solutions A/S
Thyborønvej 78
DK-7673 Harbøre
Denmark

Telephone: +45 9690 9690
Telefax: +45 9690 9691
E-mail address: SDS-Info@fmc.com .

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:
Denmark: +45-69918573 (CHEMTREC)

Medical emergency:
Denmark: +45 82 12 12 12

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

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Short-term (acute) aquatic hazard, Category 1

H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, Category 1

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

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

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 as hazardous waste in accordance with local regulations.

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

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

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
carfentrazone-ethyl (ISO)	128639-02-1 607-309-00-5	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 100	>= 30 - < 50
D-Glucopyranose, oligomers, decyl octyl glycosides	68515-73-1 500-220-1	Eye Dam. 1; H318	>= 1 - < 3

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.
If 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.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.
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.

Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.

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 products : Fire may produce irritating, corrosive and/or toxic gases.
Nitrogen oxides (NO_x)
Carbon oxides
Chlorine compounds
Fluorine compounds

5.3 Advice for firefighters

Special protective equipment for firefighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

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.

Further information : 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.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : 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.

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 : 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 : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Avoid formation of respirable particles.

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

Provide appropriate exhaust ventilation at places where dust is formed.

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.

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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 re-sealed 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 unauthorised 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.

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
silica gel	112926-00-8	GV (total)	0,3 mg/m ³ (Silica)	DK OEL
		GV (respirable)	0,1 mg/m ³ (Silica)	DK OEL
	Further information: Means that the substance is included in the list of substances considered carcinogenic.			
		S (total powder and dust)	0,6 mg/m ³ (Silica)	DK OEL
		S (inhalable fraction)	0,2 mg/m ³ (Silica)	DK OEL

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

Substance name	End Use	Exposure routes	Potential health effects	Value
silica gel	Workers	Inhalation	Long-term systemic effects	4 mg/m ³
D-Glucopyranose, oligomers, decyl octyl glycosides	Workers	Inhalation	Long-term systemic effects	420 mg/m ³
	Workers	Dermal	Long-term systemic	595000 mg/kg

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			effects	bw/day
	Consumers	Inhalation	Long-term systemic effects	124 mg/m3
	Consumers	Dermal	Long-term systemic effects	357000 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	35,7 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
D-Glucopyranose, oligomers, decyl octyl glycosides	Fresh water	0,176 mg/l
	Marine water	0,0176 mg/l
	Fresh water sediment	1,516 mg/kg dry weight (d.w.)
	Marine sediment	0,152 mg/kg dry weight (d.w.)
	Soil	0,654 mg/kg dry weight (d.w.)
	Intermittent use (freshwater)	0,27 mg/l
	Oral	111,11 mg/kg

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

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.
Equipment should conform to EN 143

Filter type : Particulates type (P)

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.

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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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: solid
Form	: powder
Colour	: beige
Odour	: Faint odour, Chemical smell
Odour Threshold	: not determined
Melting point/freezing point	: not determined
Boiling point/boiling range	: not determined
Flammability	: Not highly flammable
Upper explosion limit / Upper flammability limit	: not determined
Lower explosion limit / Lower flammability limit	: not determined
Flash point	: not determined
Auto-ignition temperature	: No data available
Decomposition temperature	: not determined
pH	: 7,5 (25 °C) Concentration: 5,44 g/l 1 % (as a dispersion)

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Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Solubility(ies)	
Water solubility	: dispersible
Partition coefficient: n-octanol/water	: Not available for this mixture.
Vapour pressure	: Not available for this mixture.
Relative density	: 0,55
Density	: 0,716 g/cm ³ Pour density 0,735 g/cm ³ Tap density
Relative vapour density	: not determined
Particle characteristics	
Particle size	: No data available
Particle Size Distribution	: No data available
Shape	: No data available

9.2 Other information

Explosives	: Not explosive
Oxidizing properties	: Non-oxidizing
Self-ignition	: not determined

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Evaporation rate : not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

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

Dust may form explosive mixture in air.

10.4 Conditions to avoid

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.

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 hazard classes as defined in Regulation (EC) No 1272/2008

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
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.

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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: FIFRA 81.01
Symptoms: Tremors
GLP: yes

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
Assessment: The component/mixture is minimally toxic after single contact with skin.
Remarks: no mortality

D-Glucopyranose, oligomers, 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.

Product:

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Remarks : Minimal effects that do not meet the threshold for classification.

Components:

carfentrazone-ethyl (ISO):

Species : Rabbit
Assessment : Not classified as irritant
Method : US EPA Test Guideline OPP 81-5

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Result : No skin irritation

D-Glucopyranose, oligomers, 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
Assessment : Not classified as irritant
Method : EPA OPP 81-4
Result : slight irritation
GLP : yes

D-Glucopyranose, oligomers, decyl octyl glycosides:

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

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

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 sensitisation.

Components:

carfentrazone-ethyl (ISO):

Test Type : Local lymph node assay (LLNA)

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Species	:	Guinea pig
Method	:	US EPA Test Guideline OPP 81-6
Result	:	Does not cause skin sensitisation.

D-Glucopyranose, oligomers, decyl octyl glycosides:

Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.
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 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
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse (male and female) Result: negative
Germ cell mutagenicity- Assessment	:	No genotoxic potential

D-Glucopyranose, oligomers, 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: negative Test 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)

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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.

Carcinogenicity

Not classified based on available information.

Components:

carfentrazone-ethyl (ISO):

Species	: Rat, male and female
Application Route	: Oral
Exposure time	: 104 weeks
NOAEL	: 3 - 9 mg/kg bw/day
Result	: negative

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
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Effects on foetal development	: Test Type: Embryo-foetal development Species: Rat, female Application Route: Oral General Toxicity Maternal: NOEL: 100 mg/kg bw/day Embryo-foetal toxicity: NOEL: 600 mg/kg bw/day Result: negative
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Test Type: Embryo-foetal development
Species: Rabbit, female
Application Route: Oral
General Toxicity Maternal: NOEL: 150 mg/kg bw/day
Embryo-foetal toxicity: NOEL: > 300 mg/kg bw/day
Result: negative

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

D-Glucopyranose, oligomers, decyl octyl glycosides:

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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 foetal 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, oligomers, 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):

Species	: Mouse, male and female
NOAEL	: 1000 ppm
LOAEL	: 4000 ppm
Application Route	: Oral

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Exposure time : 90 days
Target Organs : Blood

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

D-Glucopyranose, oligomers, 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.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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Neurological effects

Components:

carfentrazone-ethyl (ISO):

No neurotoxicity observed in animal studies

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to algae/aquatic plants	: NOEC (algae): 0,0063 mg/l Exposure time: 72 h ErC50 (algae): 0,067 mg/l Exposure time: 72 h NOEC (Lemna gibba (gibbous duckweed)): 0.00158 µg/l Exposure time: 7 d Method: OECD Test Guideline 221 EC50 (Lemna gibba (gibbous duckweed)): 0.030 µg/l Exposure time: 7 d Method: OECD Test Guideline 221
Toxicity to soil dwelling organisms	: NOEC: 45,9 mg/kg Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 222 LC50: > 45,9 mg/kg Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 222
Toxicity to terrestrial organisms	: LD50: > 200 µg/bee Exposure time: 48 h End point: Acute oral toxicity Species: Apis mellifera (bees) 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
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Method: OECD Test Guideline 203

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 (Anabaena flos-aquae (cyanobacterium)): 0,012 mg/l
Exposure time: 72 h

NOEC (algae): 0,001 mg/l
Exposure time: 96 h

EC50 (Lemna gibba (gibbous duckweed)): 0,0057 mg/l
Exposure time: 14 d

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

M-Factor (Acute aquatic toxicity) : 10

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

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

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 35 mg/l
End point: reproduction
Exposure time: 21 d
Species: Daphnia (water flea)
Method: US EPA Test Guideline OPPTS 850.1300
Remarks: Information given is based on data obtained from similar product.

M-Factor (Chronic aquatic toxicity) : 100

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toxicity)

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

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: > 5.620 ppm
End point: Acute oral toxicity
Species: Anas platyrhynchos (Mallard duck)
Remarks: Dietary

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

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

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

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

Ecotoxicology Assessment

Toxicity Data on Soil : Harmful to the soil environment.

D-Glucopyranose, oligomers, 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

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Toxicity to microorganisms	:	EC50 (Pseudomonas putida): > 560 mg/l Exposure time: 6 h Test Type: Growth inhibition
Toxicity to fish (Chronic toxicity)	:	NOEC: 1,8 mg/l Exposure time: 28 d Species: Danio rerio (zebra fish) Method: OECD Test Guideline 204 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	LOEC: 2 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to soil dwelling organisms	:	LC0: >= 654 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 Remarks: Based on data from similar materials

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: Product contains minor amounts of not readily biodegradable components, which may not be degradable in waste water treatment plants.
------------------	---	---

Components:

carfentrazone-ethyl (ISO):

Biodegradability	:	Result: Not readily biodegradable.
------------------	---	------------------------------------

D-Glucopyranose, oligomers, decyl octyl glycosides:

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

12.3 Bioaccumulative potential

Product:

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

Components:

carfentrazone-ethyl (ISO):

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

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

D-Glucopyranose, oligomers, decyl octyl glycosides:

Partition coefficient: n-octanol/water : log Pow: 1,72 (40 °C)
pH: 6,5
Remarks: Based on data from similar materials

12.4 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: The substance/mixture and its soil metabolites have a potential for being mobile, but were not detected in a field leaching study.

Koc: 866, log Koc: 2,93

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 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 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.

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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 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. |

SECTION 14: Transport information

14.1 UN number or ID number

- | | |
|------|-----------|
| ADN | : UN 3077 |
| ADR | : UN 3077 |
| RID | : UN 3077 |
| IMDG | : UN 3077 |
| IATA | : UN 3077 |

14.2 UN proper shipping name

- | | |
|------|---|
| ADN | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Carfentrazone-ethyl) |
| ADR | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Carfentrazone-ethyl) |
| RID | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Carfentrazone-ethyl) |
| IMDG | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Carfentrazone-ethyl) |
| IATA | : Environmentally hazardous substance, solid, n.o.s.
(Carfentrazone-ethyl) |

14.3 Transport hazard class(es)

Class	Subsidiary risks
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ADN	: 9
ADR	: 9
RID	: 9
IMDG	: 9
IATA	: 9

14.4 Packing group

ADN	
Packing group	: III
Classification Code	: M7
Hazard Identification Number	: 90
Labels	: 9

ADR	
Packing group	: III
Classification Code	: M7
Hazard Identification Number	: 90
Labels	: 9
Tunnel restriction code	: (-)

RID	
Packing group	: III
Classification Code	: M7
Hazard Identification Number	: 90
Labels	: 9

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

IATA (Cargo)	
Packing instruction (cargo aircraft)	: 956
Packing instruction (LQ)	: Y956
Packing group	: III
Labels	: Miscellaneous

IATA (Passenger)	
Packing instruction (passenger aircraft)	: 956
Packing instruction (LQ)	: Y956
Packing group	: III
Labels	: Miscellaneous

14.5 Environmental hazards

ADN	
Environmentally hazardous	: yes

ADR	
Environmentally hazardous	: yes

RID

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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 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	E1	ENVIRONMENTAL HAZARDS
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The components 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
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

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

H318	: Causes serious eye damage.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
DK OEL	: Denmark. Occupational Exposure Limits
DK OEL / S	: Exposure period of 15 minutes
DK OEL / GV	: Long term exposure limit

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

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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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Based on product data or assessment
Based on product data or assessment

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