

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



ZORVEC ENICADE

Version	Revision Date:	SDS Number:	Date of last issue: -
2.0	10/3/2022	800080000572	Date of first issue: 03.10.2022

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of Ireland and may not meet the regulatory requirements in other countries.

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

1.1 Product identifier

Trade name : ZORVEC ENICADE

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

Use of the Sub-
stance/Mixture : Fungicide

Recommended restrictions
on use : Do not use product for anything outside of the above specified
uses.

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

Manufacturer/importer

Corteva Agriscience UK Limited
CPC2 CAPITAL PARK
FULBOURN CAMBRIDGE - England - CB21 5XE
UNITED KINGDOM

Customer Information : +44 800 689 8899
Number
E-mail address : SDS@corteva.com

1.4 Emergency telephone

24 Hour Emergency Telephone Number: +353 76 680 5288
National Poisons Information Centre (Beaumont Hospital): 01 809 2166 (8 AM - 10 PM)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

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.

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2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Warning

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

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

Precautionary Statements : **Response:**
P391 Collect spillage.

Disposal:

P501 Dispose of contents/container to a licensed waste disposal contractor or collection site except for empty clean triple rinsed containers which can be disposed of as non-hazardous waste.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. REACH Registration number	Classification	Concentration (% w/w)
oxathiapiprolin (ISO)	1003318-67-9 613-332-00-1	Aquatic Acute 1; H400 Aquatic Chronic 1;	10.2

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		H410	
		M-Factor (Chronic aquatic toxicity): 1	
Anionic and nonionic surfactant blend	Not Assigned	Skin Irrit. 2; H315 Eye Irrit. 2; H319	$\geq 3 - < 10$
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5 265-198-5 649-424-00-3 01-2119451097-39, 01-2119451151-53, 01-2119463583-34, 01-2119510128-50	STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 1	$\geq 1 - < 2.5$

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

- General advice : Never give anything by mouth to an unconscious person.
For specialist advice contact the National Poisons Information Service. Healthcare Professionals: (01) 809 2566 or (01) 837 9964 (24h per day –365 days per year). Public Poisons Information Line: (01) 809 2166(8am-10pm).
- If inhaled : Move to fresh air.
Consult a physician after significant exposure.
Artificial respiration and/or oxygen may be necessary.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off immediately with soap and plenty of water.
In the case of skin irritation or allergic reactions see a physician.
Wash contaminated clothing before re-use.
- In case of eye contact : If easy to do, remove contact lens, if worn.
Hold eye open and rinse slowly and gently with water for 15-20 minutes.
If eye irritation persists, consult a specialist.
- If swallowed : Call a physician or poison control center immediately.
Do not induce vomiting without medical advice.
If victim is conscious:
Rinse mouth with water.
Drink 1 or 2 glasses of water.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : No cases of human intoxication are known and the symptoms

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of experimental intoxication are not known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Ensure adequate ventilation.
Use personal protective equipment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

6.2 Environmental precautions

Environmental precautions : If the product contaminates rivers and lakes or drains inform

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respective authorities.
Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g., by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
Prevent from entering into soil, ditches, sewers, underwater.
See Section 12, Ecological Information.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped,
Recovered material should be stored in a vented container.
The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to over-pressurization of the container.
Keep in suitable, closed containers for disposal.
Wipe up with absorbent material (e.g. cloth, fleece).
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
See Section 13, Disposal Considerations, for additional information.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Provide sufficient air exchange and/or exhaust in work rooms.
Handle in accordance with good industrial hygiene and safety practice.
Avoid exposure - obtain special instructions before use.
Smoking, eating and drinking should be prohibited in the application area.
Avoid inhalation of vapor or mist.
Do not swallow.
Avoid contact with skin and eyes.
Take care to prevent spills, waste and minimize release to the

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environment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands and face before breaks and immediately after handling the product. Remove clothing/PPE immediately if material gets inside. For environmental protection remove and wash all contaminated protective equipment before re-use. Dispose of rinse water in accordance with local and national regulations.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labeled containers. Store in accordance with the particular national regulations.

Advice on common storage : Strong oxidizing agents

Packaging material : Unsuitable material: None known.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Propanediol	57-55-6	Occupational exposure limit value (8-hour reference period) (particles)	10 mg/m ³	IE OEL
		Occupational exposure limit value (8-hour reference period) (total (vapour and particles))	150 ppm 470 mg/m ³	IE OEL

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

Substance name	End Use	Routes of exposure	Potential health effects	Value
Glycerides, mixed decanoyl and octanoyl	Workers	Inhalation	Long-term systemic effects	177.79 mg/m ³
	Workers	Skin contact	Long-term systemic effects	25.21 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	43.84 mg/m ³

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	Consumers	Skin contact	Long-term systemic effects	12.61 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	12.61 mg/kg bw/day
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	Consumers	Oral	Systemic effects	7.5 mg/kg
	Workers	Dermal	Systemic effects	12.5 mg/kg
	Consumers	Dermal	Systemic effects	7.5 mg/kg
	Workers	Inhalation	Systemic effects	151 mg/m3
	Consumers	Inhalation	Systemic effects	32 mg/m3
Propanediol	Workers	Inhalation	Long-term local effects	10 mg/m3
	Workers	Inhalation	Long-term systemic effects	168 mg/m3
	Consumers	Inhalation	Long-term local effects	10 mg/m3
	Consumers	Inhalation	Long-term systemic effects	50 mg/m3

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

Substance name	Environmental Compartment	Value
Glycerides, mixed decanoyl and octanoyl	Oral (Secondary Poisoning)	0.03 mg/kg food
Propanediol	Fresh water	260 mg/l
	Sea water	26 mg/l
	Intermittent use/release	183 mg/l
	Sewage treatment plant	20000 mg/l
	Fresh water sediment	572 mg/kg
	Sea sediment	57.2 mg/kg
	Soil	50 mg/kg

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Use sufficient ventilation to keep employee exposure below recommended limits.

Personal protective equipment

Eye protection : Wear protective eyewear to prevent contact with this substance.
Safety glasses with side-shields conforming to EN166

Hand protection

Remarks : The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Gloves must be

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inspected prior to use. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Gauntlets shorter than 35 cm long shall be worn under the combination sleeve. Gauntlets of 35 cm long or longer shall be worn over the combination sleeve. Before removing gloves clean them with soap and water.

Skin and body protection : Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection : Manufacturing and processing work:
Half mask with a particle filter FFP1 (EN149)

Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated.
Only protected handlers may be in the area during application.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Color	: off-white
Odor	: oily, characteristic
Odor Threshold	: not determined
Melting point/freezing point	: No data available
Boiling point/boiling range	: not determined
Flammability	: The product is not flammable.
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Flash point	: > 100 °C
pH	: 6.5 (1% solution in water)
Viscosity	
Viscosity, dynamic	: not determined
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-	: Not applicable

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octanol/water	
Vapor pressure	: No data available
Relative density	: No data available
Density	: 0.98 g/cm ³
Relative vapor density	: No data available

9.2 Other information

Explosives	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Self-ignition	: 335 °C
Evaporation rate	: No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

No decomposition if stored and applied as directed.
Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	: Stable under recommended storage conditions. No hazards to be specially mentioned.
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10.4 Conditions to avoid

Conditions to avoid	: None known.
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10.5 Incompatible materials

Materials to avoid	: Strong acids Strong bases Strong oxidizing agents
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10.6 Hazardous decomposition products

Carbon oxides
Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

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

Acute toxicity

Product:

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Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg
Method: OECD Test Guideline 425
Symptoms: No deaths occurred at this concentration.

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
Symptoms: No deaths occurred at this concentration.

Components:

oxathiapiprolin (ISO):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

Anionic and nonionic surfactant blend:

Acute oral toxicity : Remarks: Low toxicity if swallowed.
Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

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

Acute dermal toxicity : Remarks: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50 (Rabbit): > 5,000 mg/kg
Method: Acute toxicity estimate

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

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.68 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity

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tion toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Symptoms: No deaths occurred at this concentration.
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Moderate irritation.

Components:

oxathiapiprolin (ISO):

Species : Rabbit
Result : No skin irritation

Anionic and nonionic surfactant blend:

Result : Skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Components:

oxathiapiprolin (ISO):

Species : Rabbit
Result : No eye irritation

Anionic and nonionic surfactant blend:

Result : Eye irritation

Respiratory or skin sensitization

Product:

Test Type : Maximization Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : May cause sensitization by skin contact.

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Components:

oxathiapiprolin (ISO):

Test Type	:	Maximization Test
Species	:	Guinea pig
Result	:	Does not cause skin sensitization.

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

Remarks	:	Did not cause allergic skin reactions when tested in humans.
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Remarks	:	For respiratory sensitization: No relevant data found.
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Germ cell mutagenicity

Components:

oxathiapiprolin (ISO):

Germ cell mutagenicity- Assessment	:	Animal genetic toxicity studies were negative.
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Carcinogenicity

Components:

oxathiapiprolin (ISO):

Carcinogenicity - Assessment	:	Did not cause cancer in laboratory animals.
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Reproductive toxicity

Components:

oxathiapiprolin (ISO):

Reproductive toxicity - Assessment	:	In animal studies, did not interfere with reproduction. Animal testing did not show any effects on fetal development.
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Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Reproductive toxicity - Assessment	:	In animal studies, did not interfere with reproduction.
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STOT-single exposure

Product:

Assessment	:	Evaluation of available data suggests that this material is not an STOT-SE toxicant.
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Components:

oxathiapiprolin (ISO):

Assessment	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.
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Anionic and nonionic surfactant blend:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

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

Routes of exposure : Inhalation
Target Organs : Central nervous system
Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure

Components:

oxathiapirolin (ISO):

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

Repeated dose toxicity

Components:

oxathiapirolin (ISO):

Remarks : Based on available data, repeated exposures are not expected to cause significant adverse effects except at very high aerosol concentrations. Repeated excessive aerosol exposures may cause respiratory tract irritation and even death.

Anionic and nonionic surfactant blend:

Remarks : No relevant data found.

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

Remarks : In animals, effects have been reported on the following organs:
Lung.
Gastrointestinal tract.
Thyroid.
Urinary tract.
Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.
Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapor or dust.

Aspiration toxicity

Product:

Based on available information, aspiration hazard could not be determined.

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Components:

oxathiapiprolin (ISO):

Based on available information, aspiration hazard could not be determined.

Anionic and nonionic surfactant blend:

May be harmful if swallowed and enters airways.

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

May be fatal if swallowed and enters airways.

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.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 10 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 9.62 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 3.5 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Skeletonema costatum (Diatom)): 0.141 mg/l Exposure time: 72 h
Toxicity to soil dwelling organisms	: LD50: > 1,000 mg/kg Exposure time: 28 d Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	: oral LD50: >1348.76 µg/b Exposure time: 48 h End point: mortality Species: Apis mellifera (bees)

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Method: OECD Test Guideline 213

contact LD50: >981.35 µg/b
Exposure time: 48 h
End point: mortality
Species: Apis mellifera (bees)
Method: OECD Test Guideline 214

LD50: > 2,250 mg/kg
Species: Colinus virginianus (Bobwhite quail)
Method: US EPA Test Guideline OPPTS 850.2100
Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

dietary LC50: > 5,620 mg/kg
Exposure time: 8 d
Species: Colinus virginianus (Bobwhite quail)
Method: US EPA Test Guideline OPPTS 850.2200
Remarks: Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

Components:

oxathiapiprolin (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.69 mg/l Exposure time: 96 h Test Type: Static LC50 (Lepomis macrochirus (Bluegill sunfish)): > 0.74 mg/l Exposure time: 96 h Test Type: Static LC50 (Cyprinodon variegatus (sheepshead minnow)): > 0.65 mg/l Exposure time: 96 h Test Type: static test Method: OPPTS 850.1075 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.67 mg/l Exposure time: 48 h Test Type: Static
Toxicity to algae/aquatic plants	:	ErC50 (Skeletonema costatum (marine diatom)): 0.351 mg/l Exposure time: 96 h ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.142 mg/l Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.46 mg/l Exposure time: 88 d Species: Oncorhynchus mykiss (rainbow trout)

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NOEC: 0.34 mg/l
Exposure time: 35 d
Species: Cyprinodon variegatus (sheepshead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.75 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test

NOEC: 0.058 mg/l
Exposure time: 32 d
Species: Americamysis bahia (mysid shrimp)
Test Type: flow-through test

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to terrestrial organisms : LD50: > 2,250 mg/kg
Species: Colinus virginianus (Bobwhite quail)
Method: OPPTS 850.2100

LD50: > 2,250 mg/kg
Species: Poephila guttata (zebra finch)
Method: OPPTS 850.2100

dietary LC50: > 5,620 mg/kg
Exposure time: 5 d
Species: Colinus virginianus (Bobwhite quail)
Method: OECD Test Guideline 205

dietary LC50: > 5,620 mg/kg
Exposure time: 5 d
Species: Anas platyrhynchos (Mallard duck)
Method: OECD Test Guideline 205

Anionic and nonionic surfactant blend:

Toxicity to fish : Remarks: Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species).

Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life.

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

Toxicity to fish : LC50 (Freshwater fish): 10 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3 - 10 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : ErC50 (Marine algae (Skeletonema costatum)): 2.5 mg/l
End point: Cell Density

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Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 1

12.2 Persistence and degradability

Components:

oxathiapiprolin (ISO):

Biodegradability : Result: Not readily biodegradable.

Anionic and nonionic surfactant blend:

Biodegradability : Remarks: Material is expected to be readily biodegradable.

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

Biodegradability : Result: Not biodegradable
Remarks: Biodegradation may occur under aerobic conditions (in the presence of oxygen).
Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Biodegradation: 30 - 41 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent
Remarks: 10-day Window: Fail

12.3 Bioaccumulative potential

Components:

oxathiapiprolin (ISO):

Bioaccumulation : Bioconcentration factor (BCF): 62

Anionic and nonionic surfactant blend:

Partition coefficient: n-octanol/water : Remarks: No relevant data found.

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

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 61 - 115
Method: Estimated.

Partition coefficient: n-octanol/water : log Pow: 2.9 - 6.1
Method: OECD Test Guideline 117 or Equivalent
Remarks: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

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12.4 Mobility in soil

Product:

Distribution among environmental compartments : Remarks: The product is not expected to be mobile in soils.

Components:

Anionic and nonionic surfactant blend:

Distribution among environmental compartments : Remarks: No relevant data found.

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

Distribution among environmental compartments : Remarks: No relevant data found.

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.

Components:

Anionic and nonionic surfactant blend:

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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

Components:

Anionic and nonionic surfactant blend:

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

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

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Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

SECTION 14: Transport information

14.1 UN number or ID number

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

14.2 UN proper shipping name

ADR	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxathiapiprolin)
RID	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxathiapiprolin)
IMDG	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxathiapiprolin)
IATA	: Environmentally hazardous substance, liquid, n.o.s. (Oxathiapiprolin)

14.3 Transport hazard class(es)

ADR	: 9
RID	: 9
IMDG	: 9

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IATA : 9

14.4 Packing group

ADR

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

RID

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

IMDG

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

IATA (Cargo)

Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : yes

14.6 Special precautions for user

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

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

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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 - Candidate List of Substances of Very High Concern for Authorization (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 (EC) 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.	Not applicable
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15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications..

The mixture is evaluated within the frame of the provisions of Regulation (EC) No. 1107/2009.

Refer to the label for exposure assessment information.

SECTION 16: Other information

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Full text of H-Statements

H304	: May be fatal if swallowed and enters airways.
H315	: Causes skin irritation.
H319	: Causes serious eye irritation.
H336	: May cause drowsiness or dizziness.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H411	: 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

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Asp. Tox.	:	Aspiration hazard
Eye Irrit.	:	Eye irritation
Skin Irrit.	:	Skin irritation
STOT SE	:	Specific target organ toxicity - single exposure
IE OEL	:	Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
IE OEL / OELV - 8 hrs (TWA)	:	Occupational exposure limit value (8-hour reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : Take notice of the directions of use on the label.

Classification of the mixture:

Classification procedure:

Skin Sens. 1	H317	Based on product data or assessment
Aquatic Chronic 2	H411	Based on product data or assessment

Product code: GF-3856

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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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