

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

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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.

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### 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

#### 1.3 Details of the supplier of the safety data sheet

##### COMPANY IDENTIFICATION

##### Manufacturer/importer

Corteva Agriscience UK Limited  
Melbourn Science Park - Cambridge Road - Unit H4, Building H  
Melbourn Cambridgeshire - SG8 6HB  
UNITED KINGDOM

**Customer Information** : +44 8006 89 8899

**Number**

**E-mail address** : SDS@corteva.com

#### 1.4 Emergency telephone number

SGS : +353 818 663 627

National Poisons Information Centre (Beaumont Hospital): 01 809 2166 (8 AM - 10 PM)

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1

H317: May cause an allergic skin reaction.

Long-term (chronic) aquatic hazard, Category 2

H411: Toxic to aquatic life with long lasting effects.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

---

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P261 Avoid breathing spray.  
P280 Wear protective gloves.

#### **Response:**

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
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.

### Additional Labelling

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

### 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

### 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; H410  M-Factor (Chronic aquatic toxicity): 1	10.2
Anionic and nonionic surfactant blend	Not Assigned	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 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	>= 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

---

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 centre 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 of experimental intoxication are not known.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
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.

Hazardous combustion products : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.  
Combustion products may include and are not limited to:  
Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)

### 5.3 Advice for firefighters

Special protective equipment for firefighters : 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

---

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.

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### 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 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

---

### 6.4 Reference to other sections

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

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : 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 vapour or mist.  
Do not swallow.  
Avoid contact with skin and eyes.  
Take care to prevent spills, waste and minimize release to the 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 labelled containers. Store in accordance with the particular national regulations.
- Advice on common storage : Strong oxidizing agents
- Packaging material : Unsuitable material: Do not store in or use containers except the original product package.

### 7.3 Specific end use(s)

- Specific use(s) : Plant protection products subject to Regulation (EC) No 1107/2009.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

### 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 <sup>3</sup>	IE OEL
		Occupational exposure limit value (8-hour reference period) (total (vapour and particles))	150 ppm 470 mg/m <sup>3</sup>	IE OEL

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Glycerides, mixed decanoyl and octanoyl	Workers	Inhalation	Long-term systemic effects	177.79 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	25.21 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	43.84 mg/m <sup>3</sup>
	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
Workers		Dermal	Systemic effects	12.5 mg/kg
Consumers		Dermal	Systemic effects	7.5 mg/kg
Workers		Inhalation	Systemic effects	151 mg/m <sup>3</sup>
Consumers		Inhalation	Systemic effects	32 mg/m <sup>3</sup>
Propanediol		Workers	Inhalation	Long-term local effects
	Workers	Inhalation	Long-term systemic effects	168 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term local effects	10 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term systemic effects	50 mg/m <sup>3</sup>

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

Substance name	Environmental Compartment	Value
Glycerides, mixed decanoyl and octanoyl	Oral (Secondary Poisoning)	0.03 mg/kg food
Propanediol	Fresh water	260 mg/l
	Marine water	26 mg/l
	Intermittent use/release	183 mg/l
	Sewage treatment plant	20000 mg/l
	Fresh water sediment	572 mg/kg
	Marine 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/face 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 inspected prior to use. Gloves should be discarded or 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)

Mixer and loaders must wear:  
Half mask with a particle filter FFP1 (EN149)

Spray application - outdoor:  
Tractor / sprayer with hood:



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0	Revision Date: 08.04.2024	SDS Number: 800080000572	Date of last issue: - Date of first issue: 08.04.2024
----------------	------------------------------	-----------------------------	--

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No personal respiratory protective equipment normally required.

Tractor / sprayer without hood:

Low application:

No personal respiratory protective equipment normally required.

Backpack / knapsack sprayer:

Low application:

No personal respiratory protective equipment normally required.

Mechanical automatized spray application in closed tunnel:

No personal respiratory protective equipment normally required.

Drip irrigation:

No personal respiratory protective equipment normally required.

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.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	: liquid
Colour	: off-white
Odour	: oily, characteristic
Odour Threshold	: not determined
Melting point/freezing point	: No data available
Boiling point/boiling range	: not determined

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

---

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-octanol/water : Not applicable

Vapour pressure : No data available

Relative density : No data available

Density : 0.98 g/cm<sup>3</sup>

Relative vapour 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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

---

Evaporation rate : No data available

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

#### 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.

#### 10.4 Conditions to avoid

Conditions to avoid : None known.

#### 10.5 Incompatible materials

Materials to avoid : Strong acids  
Strong bases  
Strong oxidizing agents

#### 10.6 Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

Decomposition products can include and are not limited to:

Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)

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### SECTION 11: Toxicological information

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

##### Acute toxicity

###### Product:

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

Acute inhalation toxicity : LC50 (Rat): > 5.08 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Remarks: Information source: Internal study report

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg

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# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

---

Method: OECD Test Guideline 402  
Symptoms: No deaths occurred at this concentration.  
Remarks: Information source: Internal study report

### 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 : LD50 (Rat): > 2,000 mg/kg  
Method: Acute toxicity estimate
- Acute dermal toxicity : 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: vapour  
Assessment: The substance or mixture has no acute inhalation 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 : No skin irritation  
Remarks : Information source: Internal study report

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

---

### 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  
Remarks : Information source: Internal study report

### Components:

#### **oxathiapiprolin (ISO):**

Species : Rabbit  
Result : No eye irritation

#### **Anionic and nonionic surfactant blend:**

Result : Eye irritation

### **Respiratory or skin sensitisation**

#### Product:

Test Type : Maximisation Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : May cause sensitisation by skin contact.  
Remarks : Information source: Internal study report

### Components:

#### **oxathiapiprolin (ISO):**

Test Type : Maximisation Test  
Species : Guinea pig  
Result : Does not cause skin sensitisation.

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

Remarks : Did not cause allergic skin reactions when tested in humans.

Remarks : For respiratory sensitization:  
No relevant data found.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

---

### Germ cell mutagenicity

#### Components:

##### **oxathiapiprolin (ISO):**

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

### Carcinogenicity

#### Components:

##### **oxathiapiprolin (ISO):**

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

### Reproductive toxicity

#### Components:

##### **oxathiapiprolin (ISO):**

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction. Animal testing did not show any effects on foetal development.

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

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

### STOT - single exposure

#### Product:

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

#### Components:

##### **oxathiapiprolin (ISO):**

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

##### **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:**

Exposure routes : Inhalation  
Target Organs : Central nervous system  
Assessment : May cause drowsiness or dizziness.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

---

### STOT - repeated exposure

**Product:**

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

**Components:**

**oxathiapiprolin (ISO):**

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

### Repeated dose toxicity

**Components:**

**oxathiapiprolin (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.

**Components:**

**oxathiapiprolin (ISO):**

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

---

### 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.

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## 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  
Remarks: Information source: Internal study report

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  
Remarks: Information source: Internal study report

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 3.5 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Information source: Internal study report

NOEC (Skeletonema costatum (Diatom)): 0.141 mg/l  
Exposure time: 72 h  
Remarks: Information source: Internal study report

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)



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

---

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)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

---

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

---

Toxicity to algae/aquatic plants : ErC50 (Marine algae (Skeletonema costatum)): 2.5 mg/l  
End point: Cell Density  
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- : log Pow: 2.9 - 6.1

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

---

octanol/water

Method: OECD Test Guideline 117 or Equivalent  
Remarks: Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

### 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

---

### 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:**

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

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## 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.

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## 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.

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# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version 1.0      Revision Date: 08.04.2024      SDS Number: 800080000572      Date of last issue: -  
Date of first issue: 08.04.2024

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**IATA** : (Oxathiapiprolin)  
Environmentally hazardous substance, liquid, n.o.s.  
(Oxathiapiprolin)

### 14.3 Transport hazard class(es)

	Class	Subsidiary risks
<b>ADR</b>	: 9	
<b>RID</b>	: 9	
<b>IMDG</b>	: 9	
<b>IATA</b>	: 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 : yes

**RID**  
Environmentally hazardous : yes

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

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### IMDG

Marine pollutant : yes(Oxathiapiprolin)

### 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 5 L 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 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.

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## 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 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) : naphthalene

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

### 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

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
Asp. Tox.	:	Aspiration hazard
Eye Irrit.	:	Eye irritation
Skin Irrit.	:	Skin irritation
STOT SE	:	Specific target organ toxicity - single exposure
IE OEL	:	List of Chemical Agents and Carcinogens with Occupational Exposure Limit Values - Code of Practice, Schedule 1 and 2
IE OEL / OELV - 8 hrs (TWA)	:	Occupational exposure limit value (8-hour reference period)

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; ECx - Concentration associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; 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; NOEC - Non-Observed Effective Concentration; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; (Q)SAR - (Quantitative) Structure Activity Relationship; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SDS - Safety Data Sheet; UN - United Nations.

EC-Number - European Community number REACH - Regulation (EC) No 1907/2006 of the European Parliament and of Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.

#### Further information

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

#### Classification of the mixture:

Skin Sens. 1 H317

#### Classification procedure:

Based on product data or assessment



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, Annex II and its amendments.



## ZORVEC ENICADE®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.04.2024	800080000572	Date of first issue: 08.04.2024

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Aquatic Chronic 2	H411	Based on product data or assessment
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Product code: GF-3856

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.

IE / 6N