

SAFETY DATA SHEET



Coragen® eVo insecticide

Version	Revision Date:	SDS Number:	Date of last issue: 15.05.2023
1.0	15.05.2023	50002517	Date of first issue: 15.05.2023

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

1.1 Product identifier

Product name Coragen® eVo insecticide

Other means of identification

Product code 50002517

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

Use of the Sub- : Insecticide
stance/Mixture

Recommended restrictions : Use as recommended by the label.
on use

1.3 Details of the supplier of the safety data sheet

Manufacturer or supplier's details FMC International Switzerland Sarl (FISSa)
Chemin de Blandonnet 8
1214
Switzerland
Telephone: Phone: +41 22 518 89 61
E-mail address: SDS-Info@fmc.com

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:
1 703 / 527-3887 (CHEMTREC - Alternate)
1 703 / 741-5970 (CHEMTREC - International)
All other countries: +1 651 / 632-6793 (Collect)
Switzerland: 41-435082011 (CHEMTREC)
1 202 / 483-7616 (CHEMTREC - Alternate International)

Medical emergency:
All other countries: +1 651 / 632-6793 (Collect)
Switzerland: 145

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

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

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1), 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Chlorantraniliprole	500008-45-7	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 30 - < 50
propane-1,2-diol	57-55-6 200-338-0		>= 1 - < 10
Sodium alkyl naphthalene sulfonate	68425-94-5	Eye Irrit. 2; H319 Aquatic Chronic 3;	>= 1 - < 2,5

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2,4,7,9-tetramethyldec-5-yne-4,7-diol	126-86-3 204-809-1	H412 Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Sens. 1B; H317 STOT SE 3; H335 (Respiratory system) Aquatic Chronic 3; H412	$\geq 0,25 - < 1$
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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.
- Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.
- If inhaled : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.
Wash off with soap and plenty of water.
Get medical attention if irritation develops and persists.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- 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.

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SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media : High volume water jet

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 : Thermal decomposition can lead to release of irritating gases and vapours.
Nitrogen oxides (NO_x)
Carbon oxides
Bromine compounds
Chlorine compounds
Hydrogen cyanide
Hydrogen chloride
Sulphur oxides

5.3 Advice for firefighters

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

Wear self-contained breathing apparatus for firefighting if necessary.

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 : 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.

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 : Use personal protective equipment.
If it can be safely done, stop the leak.
Keep people away from and upwind of spill/leak.

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Remove all sources of ignition.
Immediately evacuate personnel to safe areas.
Ensure adequate ventilation.
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 further leakage or spillage if safe to do so.
Prevent product from entering drains.
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 : Never return spills in original containers for re-use.
Collect as much of the spill as possible with a suitable absorbent material.
Pick up and transfer to properly labelled containers.
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 : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

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

Hygiene measures : General industrial hygiene practice. Avoid contact with skin, eyes and clothing. Do not inhale aerosol. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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.

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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 : 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
propane-1,2-diol	57-55-6	MAC (aerosol and vapour)	7 mg/m ³	UA OEL
Further information	Danger class 3			

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

Substance name	End Use	Exposure routes	Potential health effects	Value
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m ³
	Workers	Inhalation	Long-term local effects	10 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	50 mg/m ³
	Consumers	Inhalation	Long-term local effects	10 mg/m ³
glycerol	Consumers	Oral	Long-term systemic effects	229 mg/kg
	Consumers	Inhalation	Long-term local effects	33 mg/m ³
	Workers	Inhalation	Long-term local effects	56 mg/m ³
2,4,7,9-tetramethyldec-5-yne-4,7-diol	Workers	Inhalation	Long-term systemic effects	1,76 mg/m ³
	Workers	Dermal	Long-term systemic effects	0,5 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0,43 mg/m ³

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	Consumers	Dermal	Long-term systemic effects	0,25 mg/kg
	Consumers	Oral	Long-term systemic effects	0,25 mg/kg
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Workers	Inhalation	Long-term local effects	0,02 mg/m3
	Workers	Inhalation	Acute local effects	0,04 mg/m3
	Consumers	Inhalation	Long-term local effects	0,02 mg/m3
	Consumers	Inhalation	Acute local effects	0,04 mg/m3
	Consumers	Oral	Long-term systemic effects	0,09 mg/kg
	Consumers	Oral	Acute systemic effects	0,11 mg/kg

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

Substance name	Environmental Compartment	Value
Chlorantraniliprole	Water	0,00045 mg/l
propane-1,2-diol	Fresh water	260 mg/l
	Intermittent use/release	183 mg/l
	Marine water	26 mg/l
	Sewage treatment plant	20 g/l
	Fresh water sediment	572 mg/kg
	Marine sediment	57,2 mg/kg
	Soil	50 mg/kg
glycerol	Fresh water	0,885 mg/l
	Intermittent use/release	8,85 mg/l
	Sewage treatment plant	1000 mg/l
	Fresh water sediment	3,3 mg/l
	Marine sediment	0,33 mg/l
	Soil	0,141 mg/kg dry weight (d.w.)
2,4,7,9-tetramethyldec-5-yne-4,7-diol	Fresh water	0,04 mg/l
	Marine water	0,004 mg/l
	Fresh water sediment	0,32 mg/kg dry weight (d.w.)
	Marine sediment	0,032 mg/kg dry weight (d.w.)
	Soil	0,028 mg/kg dry weight (d.w.)
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Fresh water	0,00339 mg/l
	Intermittent use/release	0,00339 mg/l
	Marine water	0,00339 mg/l
	Sewage treatment plant	0,23 mg/l
	Fresh water sediment	0,027 mg/kg
	Marine sediment	0,027 mg/kg

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8.2 Exposure controls**Personal protective equipment**

Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
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	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
Protective measures	:	Plan first aid action before beginning work with this product. Always have on hand a first-aid kit, together with proper instructions. Wear suitable protective equipment. When using do not eat, drink or smoke. In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance	:	liquid, suspension
Colour	:	white
Odour	:	like soap
Odour Threshold	:	No data available
pH	:	ca. 6,5
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 100 °C
Evaporation rate	:	No data available

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Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not available for this mixture.
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	1,2623 g/cm ³ (23,3 °C)
Bulk density	:	ca. 1,25 g/cm ³
Solubility(ies) Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	Not available for this mixture.
Auto-ignition temperature	:	No data available
Decomposition temperature	:	Thermal decomposition can lead to release of irritating gases and vapours.
Viscosity Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	325,5 mm ² /s (23,1 °C) 274,6 mm ² /s (43,5 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing

9.2 Other information

Flammability (liquids)	:	Not applicable
Molecular weight	:	Not applicable
Particle size	:	Not applicable
Particle Size Distribution	:	Not applicable
Self-ignition	:	No data available

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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.

10.4 Conditions to avoidConditions to avoid : Avoid formation of aerosol.
Heat, flames and sparks.
Protect from frost, heat and sunlight.**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 toxicological effects****Acute toxicity**

Not classified based on available information.

Product:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,16 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg

Components:**Chlorantraniliprole:**Acute oral toxicity : LD50 (Rat, female): > 5.000 mg/kg
Method: OECD Test Guideline 425Acute inhalation toxicity : LC50 (Rat, male and female): > 5,1 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

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

propane-1,2-diol:

Acute oral toxicity : LD50 (Rat, male and female): 22.000 mg/kg

Acute inhalation toxicity : LC0 (Rabbit): 31,7 mg/l
Exposure time: 2 h
Test atmosphere: vapour
Remarks: no mortality

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Sodium alkyl naphthalene sulfonate:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Acute oral toxicity : LD50 (Rat, male and female): > 500 mg/kg

Acute toxicity estimate: 500,05 mg/kg
Method: ATE value derived from LD50/LC50 value

Acute inhalation toxicity : LC0 (Rat, male and female): > 1 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Symptoms: Irritation
Remarks: no mortality

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

Skin corrosion/irritation

Not classified based on available information.

Product:

Assessment : No skin irritation
Remarks : Minimal effects that do not meet the threshold for classification.

Components:**Chlorantraniliprole:**

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

propane-1,2-diol:

Species : Rabbit
Method : OECD Test Guideline 404

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Result : No skin irritation

Sodium alkyl naphthalene sulfonate:

Remarks : No data available

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

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

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Assessment : Irritating to eyes.
Result : Eye irritation

Components:

Chlorantraniliprole:

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

propane-1,2-diol:

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

Sodium alkyl naphthalene sulfonate:

Result : Eye irritation

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Species : Rabbit
Result : Irreversible effects on the eye

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)
Assessment : Did not cause sensitisation on laboratory animals.

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Components:**Chlorantraniliprole:**

Test Type	: Maximisation Test
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: Does not cause skin sensitisation.

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

propane-1,2-diol:

Test Type	: Maximisation Test
Species	: Guinea pig
Result	: negative

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Test Type	: Local lymph node assay (LLNA)
Exposure routes	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: Probability or evidence of low to moderate skin sensitisation rate in humans

Germ cell mutagenicity

Not classified based on available information.

Components:**Chlorantraniliprole:**

Genotoxicity in vitro	: Test Type: reverse mutation assay Metabolic activation: with and without metabolic activation Result: negative
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Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo	: Test Type: Micronucleus test Species: Mouse Method: OECD Test Guideline 474 Result: negative
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Germ cell mutagenicity- Assessment	: Weight of evidence does not support classification as a germ cell mutagen.
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propane-1,2-diol:

Genotoxicity in vitro	: Test Type: reverse mutation assay Result: negative
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Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Result: negative

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Genotoxicity in vitro : Test Type: gene mutation test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Carcinogenicity

Not classified based on available information.

Components:**Chlorantraniliprole:**

Species : Rat, male and female
Application Route : Oral
Exposure time : 2 Years
NOAEL : 805 - 1.076 mg/kg bw/day
Method : OECD Test Guideline 453
Result : negative

Species : Mouse, male and female
Application Route : Oral
Exposure time : 18 month(s)
NOAEL : 158 - 1.155 mg/kg bw/day
Method : OECD Test Guideline 453
Result : negative

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

propane-1,2-diol:

Species : Rat
Application Route : Oral
Exposure time : 2 Years
Result : negative

Reproductive toxicity

Not classified based on available information.

Components:**Chlorantraniliprole:**

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
General Toxicity - Parent: NOAEL: 20.000 ppm
General Toxicity F1: NOAEL: 20.000 ppm
Method: OECD Test Guideline 416
Result: negative

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Effects on foetal development : Test Type: Pre-natal
Species: Rat
Application Route: Oral
Duration of Single Treatment: 6 - 20 d
General Toxicity Maternal: NOEL: 1.000 mg/kg bw/day
Developmental Toxicity: NOEL: 1.000 mg/kg bw/day
Method: OECD Test Guideline 414
Result: negative

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

propane-1,2-diol:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Mouse
Application Route: Oral
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 414
Result: Animal testing did not show any effects on fertility.
Remarks: Based on data from similar materials

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Result: negative

Effects on foetal development : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

STOT - single exposure

Not classified based on available information.

Components:

Chlorantraniliprole:

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

Remarks : No significant adverse effects were reported

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

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Components:**Chlorantraniliprole:**

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

Repeated dose toxicity**Components:****Chlorantraniliprole:**

Species : Rat, male and female
NOEL : 1188 - 1526 mg/kg
Application Route : Oral
Exposure time : 90 days
Method : OECD Test Guideline 408

propane-1,2-diol:

Species : Rat, male and female
NOAEL : 1.700 mg/kg
Application Route : Oral
Exposure time : 2 Years

Species : Rat, male and female
NOAEL : 1.000 mg/kg
LOAEL : 160 mg/kg
Application Route : Inhalation
Exposure time : 90 Days

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Species : Rat, male and female
NOAEL : 150 mg/kg
Application Route : Ingestion
Exposure time : 30 d
Method : OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

Product:

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

Components:**Chlorantraniliprole:**

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

Neurological effects**Components:****Chlorantraniliprole:**

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Remarks : No neurotoxicity observed in animal studies

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill sunfish)): > 21 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: (Data on the product itself)

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0,015 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: (Data on the product itself)

Toxicity to algae/aquatic plants : ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): > 7,7 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 3,8 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

LOEC (*Raphidocelis subcapitata* (freshwater green alga)): 7,7 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to soil dwelling organisms : LC50: > 1.000 mg/kg
Exposure time: 14 d
Species: *Eisenia fetida* (earthworms)

Toxicity to terrestrial organisms : LD50: > 160 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Species: *Apis mellifera* (bees)

LD50: > 150 µg/bee
Exposure time: 48 h
End point: Acute contact toxicity
Species: *Apis mellifera* (bees)

LD50: > 2.000 mg/kg
End point: Acute oral toxicity

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Species: *Colinus virginianus* (Bobwhite quail)
Method: OECD Test Guideline 223

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.
Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:**Chlorantraniliprole:**

Toxicity to fish	:	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): > 13,8 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (<i>Daphnia magna</i> (Water flea)): 0,0116 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): > 2 mg/l Exposure time: 120 h
		EC50 (<i>Lemna gibba</i> (duckweed)): > 2 mg/l Exposure time: 14 d
		NOEC (<i>Lemna gibba</i> (duckweed)): 2 mg/l Exposure time: 14 d
		ErC50 (<i>Selenastrum capricornutum</i> (green algae)): > 2 mg/l Exposure time: 72 h
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to fish (Chronic toxicity)	:	NOEC: 1,28 mg/l Exposure time: 36 d Species: <i>Cyprinodon variegatus</i> (sheepshead minnow)
		NOEC: 0,110 mg/l Exposure time: 28 d Species: <i>Oncorhynchus mykiss</i> (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,00447 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea)
M-Factor (Chronic aquatic toxicity)	:	10
Toxicity to soil dwelling organisms	:	LC50: > 1.000 mg/kg Exposure time: 14 d Species: <i>Eisenia fetida</i> (earthworms)
Toxicity to terrestrial organisms	:	LD50: > 4.0 µg/bee Exposure time: 72 h

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End point: Acute contact toxicity
 Species: Apis mellifera (bees)
 Remarks: Active substance dissolved in acetone

LD50: > 0.005 µg/bee
 Exposure time: 48 h
 End point: Acute contact toxicity
 Species: Apis mellifera (bees)
 Remarks: Active substance dissolved in water

LD50: > 104.1 µg/bee
 Exposure time: 48 h
 End point: Acute oral toxicity
 Species: Apis mellifera (bees)
 Remarks: Active substance dissolved in acetone

LD50: > 0.0274 µg/bee
 Exposure time: 48 h
 End point: Acute oral toxicity
 Species: Apis mellifera (bees)
 Remarks: Active substance dissolved in water

LD50: > 2.250 mg/kg
 Species: Colinus virginianus (Bobwhite quail)

LC50: > 5.620 ppm
 Species: Anas platyrhynchos (Mallard duck)

LD50: > 2.250 mg/kg
 Species: Poephila guttata (zebra finch)

propane-1,2-diol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40.613 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other : (Mysidopsis bahia (opossum shrimp)): 18.800 mg/l
 aquatic invertebrates Exposure time: 96 h

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): 34.100
 plants mg/l
 Exposure time: 48 h
 Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 20.000 mg/l
 Exposure time: 18 h

Toxicity to daphnia and other : NOEC: 13.020 mg/l
 aquatic invertebrates (Chronic toxicity) Exposure time: 7 d

Sodium alkyl naphthalene sulfonate:

Toxicity to fish : LC50 (Zebra fish): > 10 - 100 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203

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Remarks: Based on data from similar materials

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

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC10 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: > 10 - 100 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 42 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 91 mg/l
Exposure time: 48 h
Test Type: Immobilization

Toxicity to microorganisms : EC50 (activated sludge): 680 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition

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:

Chlorantraniliprole:

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life (DT50): 10 d
pH: 9

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propane-1,2-diol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 23,6 %
Exposure time: 64 d
Method: OECD Test Guideline 306

Sodium alkyl naphthalene sulfonate:

Biodegradability : Result: Not readily biodegradable.
Remarks: Based on data from similar materials

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 5 %
Exposure time: 28 d

12.3 Bioaccumulative potential**Product:**

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

Components:**Chlorantraniliprole:**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 15
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 2,77 (20 °C)
pH: 4

log Pow: 2,86 (20 °C)
pH: 7

log Pow: 2,80 (20 °C)
pH: 9

propane-1,2-diol:

Partition coefficient: n-octanol/water : log Pow: -1,07

2,4,7,9-tetramethyldec-5-yne-4,7-diol:

Bioaccumulation : Bioconcentration factor (BCF): 24
Remarks: This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Partition coefficient: n-octanol/water : log Pow: 2,8 (22 °C)

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12.4 Mobility in soil**Product:**

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

Components:**Chlorantraniliprole:**

Distribution among environmental compartments : Koc: 362 ml/g, log Koc: 2,55
Remarks: Mobile in soils

Stability in soil : Remarks: Very persistent in soil.

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 Other adverse effects**Product:**

Endocrine disrupting potential : 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.

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.

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.

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SECTION 14: Transport information**14.1 UN number**

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

14.2 UN proper shipping name

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

14.3 Transport hazard class(es)

ADR	:	9
IMDG	:	9
IATA	:	9

14.4 Packing group

ADR	
Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9
Tunnel restriction code	: (-)
IMDG	
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
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**

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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 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

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.

3-BROMO-4'-CHLORO-1-(3-CHLORO-2-PYRIDYL)-2'-METHYL-6'-(METHYLCARBAMOYL)-1H-PYRAZOLE-5-CARBOXANILIDE
ACTI-GEL 208 (ACTIVE MINERALS)

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

NZIoC : Not in compliance with the inventory

TECI : Not in compliance with the inventory

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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**

H302	: Harmful if swallowed.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H335	: May cause respiratory irritation.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Skin Sens.	: Skin sensitisation
STOT SE	: Specific target organ toxicity - single exposure
UA OEL	: Ukraine OEL - Order on Approval of the Hygienic Regulations of Chemicals in the Air of the Working Zone
UA OEL / MAC	: Maximum allowable concentration

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;

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SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Other information :

Classification of the mixture:

Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Calculation method
Calculation method

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