

# SAFETY DATA SHEET

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



## VOLIAM®

Version	Revision Date:	SDS Number:	Date of last issue: 11.12.2023
1.3	05.09.2024	50002621	Date of first issue: 09.11.2021

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

#### 1.1 Product identifier

**Product name** VOLIAM®

#### Other means of identification

**Product code** 50002621

**Unique Formula Identifier (UFI)** : TAYW-M2TA-5N4P-4CN5

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

**Use of the Substance/Mixture** : Can be used as insecticide only.

**Recommended restrictions on use** : Use as recommended by the label.  
For consumer and professional use.

#### 1.3 Manufacturer or supplier's details

##### Supplier Address

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

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

#### 1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:  
Emergency telephone number: 112  
Croatia: +385-17776920 (CHEMTREC)

Medical emergency:  
Medical Information Phone Number: 01-23-48-342  
All other countries: +1 651 / 632-6793 (Collect)

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## 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.

### 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      :      P102      Keep out of reach of children.

#### 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). May produce an allergic reaction.

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

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

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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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. Registration number	Classification REGULATION (EC) No 1272/2008	Concentration (% w/w)
Chlorantraniliprole	500008-45-7	Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 10 - < 20
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9 613-167-00-5	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 2; H310 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071  M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100  specific concentration limit Skin Corr. 1C; H314 >= 0,6 % Skin Irrit. 2; H315	>= 0,0002 - < 0,0015

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		0,06 - < 0,6 % Eye Irrit. 2; H319 0,06 - < 0,6 % Skin Sens. 1A; H317 ≥ 0,0015 % Eye Dam. 1; H318 ≥ 0,6 %  Acute toxicity estimate  Acute oral toxicity: 200 mg/kg Acute inhalation toxicity (dust/mist): 0,33 mg/l Acute dermal toxicity: 87 mg/kg	
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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 : Move to fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If experiencing any discomfort, immediately remove from exposure. Get medical attention if discomfort does not disappear.
- In case of skin contact : If on clothes, remove clothes.  
If on skin, rinse well with water.  
Wash off with soap and plenty of water.  
Get medical attention immediately if irritation develops and persists.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.

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Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Do not induce vomiting without medical advice.

### 4.2 Most important symptoms and effects, both acute and delayed

None known.

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

Treatment : Treat symptomatically.  
Immediate medical attention is required in case of ingestion.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or regular foam.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Fire may produce irritating, corrosive and/or toxic gases.  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides  
Bromine compounds  
Chlorine compounds  
Hydrogen cyanide  
Hydrogen chloride

### 5.3 Advice for firefighters

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

Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.  
Use a water spray to cool fully closed containers.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.  
Do not touch or walk through the spilled material.  
If it can be safely done, stop the leak.  
Use personal protective equipment.  
Never return spills in original containers for re-use.  
Mark the contaminated area with signs and prevent access to unauthorized personnel.  
Only qualified personnel equipped with suitable protective equipment may intervene.

#### 6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

#### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Shovel into suitable container for disposal.  
Clean contaminated surface thoroughly.  
To clean the floor and all objects contaminated by this material, use plenty of water.

#### 6.4 Reference to other sections

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

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.  
Avoid formation of respirable particles.  
Dispose of rinse water in accordance with local and national regulations.  
Smoking, eating and drinking should be prohibited in the application area.

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

Hygiene measures : Avoid contact with skin, eyes and clothing. This product should be used only by all personnel thoroughly trained to handle it. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Do not inhale aerosol. Re-

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move and wash contaminated clothing and gloves, including the inside, before re-use.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a place accessible by authorized persons only. Store in original container. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : The product is stable under normal conditions of warehouse storage. Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of 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	GVI (Sum of vapour and particles)	150 ppm 474 mg/m <sup>3</sup>	HR OEL
		GVI (particulate)	10 mg/m <sup>3</sup>	HR OEL

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

Substance name	End Use	Exposure routes	Potential health effects	Value
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/m <sup>3</sup>
	Workers	Inhalation	Acute local effects	0,04 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term local effects	0,02 mg/m <sup>3</sup>

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			fects	
	Consumers	Inhalation	Acute local effects	0,04 mg/m <sup>3</sup>
	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
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

## 8.2 Exposure controls

### Personal protective equipment

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

Hand protection  
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Impervious clothing  
Long sleeved clothing.  
Footwear protecting against chemicals  
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.



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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Physical state	: liquid
Form	: suspension
Colour	: white
Odour	: alcohol-like
Odour Threshold	: not determined
Melting point/ range	: -6 °C
Boiling point/boiling range	: not determined
Flammability	: Not ignitable
Upper explosion limit / Upper flammability limit	: not determined
Lower explosion limit / Lower flammability limit	: not determined
Flash point	: > 100 °C No flash up to boiling point.
Auto-ignition temperature	: No data available
Decomposition temperature	: Not available for this mixture.
pH	: 7,8 Concentration: 1 % Method: CIPAC MT 75.3
Viscosity	
Viscosity, dynamic	: Not available for this mixture.
Viscosity, kinematic	: 367 - 734 mm <sup>2</sup> /s 30 rpm
Solubility(ies)	
Water solubility	: emulsifiable
Partition coefficient: n-octanol/water	: Not available for this mixture.
Vapour pressure	: Not available for this mixture.
Relative density	: 1,08 - 1,10
Density	: 1,094 g/cm <sup>3</sup> (20 °C)
Relative vapour density	: Not available for this mixture.
Particle characteristics	
Particle size	: Not applicable
Particle Size Distribution	: Not applicable
Shape	: Not applicable

#### 9.2 Other information

Explosives	: Not explosive
Self-ignition	: not auto-flammable
Evaporation rate	: Not available for this mixture.
Molecular weight	: Not applicable

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No decomposition if stored and applied as directed.

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### 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 avoid

Conditions to avoid : Avoid formation of aerosol.  
Heat, flames and sparks.  
Protect from frost, heat and sunlight.  
Heating of the product will produce harmful and irritant vapours.

### 10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents  
Strong acids and strong bases

### 10.6 Hazardous decomposition products

Stable under recommended storage conditions.

## SECTION 11: Toxicological information

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

#### Acute toxicity

Based on available data, the classification criteria are not met.

#### Product:

Acute oral toxicity	: LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 425 GLP: yes Remarks: Information source: Internal study report (Data on the product itself)
Acute inhalation toxicity	: LC50 (Rat): > 2 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: yes Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Highest attainable concentration. no mortality
Acute dermal toxicity	: LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 402 GLP: yes Remarks: Information source: Internal study report (Data on the product itself)

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### Components:

#### **Chlorantraniliprole:**

- Acute oral toxicity : LD50 (Rat, female): > 5.000 mg/kg  
Method: OECD Test Guideline 425  
GLP: yes
- LD50 (Rat): > 5.000 mg/kg  
Method: OECD Test Guideline 425  
GLP: yes  
Remarks: Information source: Internal study report
- LD50 (Mouse, female): > 2.000 mg/kg  
Method: OECD Test Guideline 425  
GLP: no
- Acute inhalation toxicity : LC50 (Rat, male and female): > 5,1 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Information source: Internal study report
- LC50 (Rat, male and female): > 5,1 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: no mortality
- LC50 (Rat, male and female): > 5,0 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: GB 15670-1995  
GLP: yes  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: no mortality
- Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Remarks: Information source: Internal study report
- LD50 (Rat, male and female): > 5.000 mg/kg  
Method: GB 15670-1995  
GLP: yes  
Remarks: no mortality

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LD50 (Rat, male and female): > 5.000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Remarks: no mortality

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Acute oral toxicity	:	LD50 Oral (Rat, female): 200 mg/kg Method: OECD Test Guideline 423
Acute inhalation toxicity	:	LC50 (Rat, male and female): 0,33 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: Corrosive to the respiratory tract.
Acute dermal toxicity	:	LD50 (Rabbit, male): 87 mg/kg

### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

#### Product:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	Information source: Internal study report (Data on the product itself)

#### Components:

##### Chlorantraniliprole:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	Information source: Internal study report

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

Species	:	Rabbit
Method	:	GB 15670-1995
Result	:	No skin irritation
GLP	:	yes

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

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Method	:	OECD Test Guideline 404
Result	:	Corrosive after 1 to 4 hours of exposure

### Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

#### Product:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes
Remarks	:	Information source: Internal study report (Data on the product itself)

#### Components:

##### Chlorantraniliprole:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes
Remarks	:	Information source: Internal study report

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

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 405
Result	:	Slight or no eye irritation
GLP	:	yes

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Result	:	Irreversible effects on the eye
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### Respiratory or skin sensitisation

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

#### Product:

Test Type	:	Local lymph node test
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Animal test did not cause sensitization by skin contact.
GLP	:	yes

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Remarks : Information source: Internal study report  
(Data on the product itself)

### Components:

#### **Chlorantraniliprole:**

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

Remarks : Information source: Internal study report

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

#### **reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):**

Test Type : Local lymph node assay (LLNA)  
Species : Mouse  
Result : The product is a skin sensitiser, sub-category 1A.

### **Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

### Product:

Genotoxicity in vitro : Test Type: Ames test  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse  
Method: OECD Test Guideline 474  
Result: negative

### Components:

#### **Chlorantraniliprole:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Metabolic activation: with and without metabolic activation  
Result: negative

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

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Species: Mouse  
Method: OECD Test Guideline 474  
Result: negative

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

### Carcinogenicity

Based on available data, the classification criteria are not met.

#### 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.

### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### 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

Effects on foetal development : Test Type: Pre-natal  
Species: Rat  
Application Route: Oral  
Duration of Single Treatment: 6 - 20 Days  
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

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

### STOT - single exposure

Based on available data, the classification criteria are not met.

#### Product:

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

#### Components:

##### Chlorantraniliprole:

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

### STOT - repeated exposure

Based on available data, the classification criteria are not met.

#### Product:

Remarks : Refer to acute toxicity and/or repeated dose toxicity data for more information on target organs if applicable.

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

#### 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

Species : Rat  
NOAEL : 8.000 mg/kg  
Application Route : Oral - feed  
Exposure time : 28 Days  
Method : OECD Test Guideline 407  
GLP : yes



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Species	: Rat
NOAEL	: 300 mg/kg
Application Route	: Dermal
Exposure time	: 28 Days
Method	: OECD Test Guideline 410
GLP	: yes

Species	: Rat
NOAEL	: 20.000 mg/kg
Application Route	: Oral - feed
Exposure time	: 90 Days
Method	: OECD Test Guideline 408
GLP	: yes
Remarks	: Information source: Internal study report

Species	: Mouse
NOAEL	: 7.000 mg/kg
Application Route	: Oral - feed
Exposure time	: 90 Days
Method	: OECD Test Guideline 408
GLP	: yes
Remarks	: Information source: Internal study report

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Species	: Dog
NOAEL	: 22 mg/kg
Application Route	: Oral

Species	: Rat
NOAEL	: 16,3 - 24,7 mg/kg
Application Route	: Skin contact

Species	: Rat
NOAEL	: 2.36 mg/m <sup>3</sup>
Application Route	: Inhalation

### Aspiration toxicity

Based on available data, the classification criteria are not met.

### 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.

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### 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.

##### Components:

##### **Chlorantraniliprole:**

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.

#### Neurological effects

##### Components:

##### **Chlorantraniliprole:**

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 (Oncorhynchus mykiss (rainbow trout)): > 9,9 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: Information source: Internal study report (Data on the product itself)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 0,035 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yes

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Remarks: Information source: Internal study report  
(Data on the product itself)

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 20 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes  
Remarks: Information source: Internal study report  
(Data on the product itself)

Toxicity to soil dwelling organisms : LC50: > 1.000 mg/kg  
Exposure time: 14 d  
Species: Eisenia fetida (earthworms)  
Method: OECD Test Guideline 207  
GLP:yes  
Remarks: Information source: Internal study report  
(Data on the product itself)

Toxicity to terrestrial organisms : LD50: > 2.000 mg/kg  
Species: Colinus virginianus (Bobwhite quail)  
Method: US EPA Test Guideline OPPTS 850.2100  
GLP:yes  
Remarks: Information source: Internal study report  
(Data on the product itself)

LD50: > 541 µg/bee  
Exposure time: 48 h  
End point: Acute oral toxicity  
Species: Apis mellifera (bees)  
Method: OECD Test Guideline 213  
GLP:yes  
Remarks: Information source: Internal study report  
(Data on the product itself)

LD50: > 541 µg/bee  
Exposure time: 48 h  
End point: Acute contact toxicity  
Species: Apis mellifera (bees)  
Method: OECD Test Guideline 214  
GLP:yes  
Remarks: Information source: Internal study report  
(Data on the product itself)

### Components:

#### **Chlorantraniliprole:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 13,8 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
Remarks: Information source: Internal study report

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LC50 (Lepomis macrochirus (Bluegill sunfish)): > 15,1 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yes  
Remarks: Information source: Internal study report

LC50 (Cyprinodon sp. (minnow)): > 12 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,0116 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yes

LC50 (Hyalella azteca (Amphipod)): 0,26 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yes

LC50 (Ceriodaphnia dubia (water flea)): 0,0067 - 0,011 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l  
Exposure time: 120 h

NOEC (Lemna gibba (duckweed)): > 2 mg/l  
End point: Biomass  
Exposure time: 14 d  
Test Type: static test

ErC50 (Selenastrum capricornutum (green algae)): > 2 mg/l  
Exposure time: 72 h

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l  
Exposure time: 72 h  
Method: US EPA Test Guideline OPP 122-2 & 123-2  
GLP: yes  
Remarks: Information source: Internal study report

EbC50 (Lemna gibba (duckweed)): > 2 mg/l  
End point: Frond  
Exposure time: 14 d  
Test Type: static test  
Method: US EPA Test Guideline OPP 122-2 & 123-2  
GLP: yes  
Remarks: Information source: Internal study report

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NOEC (Anabaena flos-aquae (cyanobacterium)): > 2 mg/l  
End point: Growth rate  
Exposure time: 120 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

NOEC (Skeletonema costatum (Diatom)): > 14,6 mg/l  
End point: Growth rate  
Exposure time: 120 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

NOEC (Navicula pelliculosa (Diatom)): > 15,1 mg/l  
End point: Growth rate  
Exposure time: 120 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC: 1,28 mg/l  
Exposure time: 36 d  
Species: Cyprinodon variegatus (sheepshead minnow)

NOEC: 0,110 mg/l  
Exposure time: 28 d  
Species: Oncorhynchus mykiss (rainbow trout)  
Method: OECD Test Guideline 210  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,00447 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: US EPA Test Guideline OPPTS 850.1300  
GLP: yes

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to soil dwelling organisms : LC50: > 1.000 mg/kg  
Exposure time: 14 d  
Species: Eisenia fetida (earthworms)  
Method: OECD Test Guideline 207  
GLP: yes

Remarks: No significant adverse effect on nitrogen mineralization.  
No significant adverse effect on carbon mineralization.

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Toxicity to terrestrial organisms : LD50: > 4,0 µg/bee  
Exposure time: 72 h  
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: Poephila guttata (zebra finch)

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,19 mg/l  
Exposure time: 96 h  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,16 mg/l  
Exposure time: 48 h

NOEC (Daphnia magna (Water flea)): 0,1 mg/l  
Exposure time: 21 d

EC50 (Daphnia magna (Water flea)): 0,18 mg/l  
Exposure time: 21 d

Toxicity to algae/aquatic plants : NOEC (Skeletonema costatum (marine diatom)): 0,00049 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 201

NOEC (Skeletonema costatum (marine diatom)): 0,019 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

EC50 (Skeletonema costatum (marine diatom)): 0,037 mg/l

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Exposure time: 48 h  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 100

Toxicity to microorganisms : NOEC (activated sludge): 0,91 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
GLP: yes

EC50 (activated sludge): 4,5 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
GLP: yes

Toxicity to fish (Chronic toxicity) : NOEC: 0,02 mg/l  
Exposure time: 35 d  
Species: Danio rerio (zebra fish)  
Method: OECD Test Guideline 210  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

Chronic Toxicity Value: 0,18 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 100

### 12.2 Persistence and degradability

#### Product:

Biodegradability : Result: Not readily biodegradable.  
Remarks: Estimation based on data obtained on active ingredient.

#### Components:

##### **Chlorantraniliprole:**

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life (DT50): 10 d (25 °C)  
pH: 9

Degradation half life (DT50): 0,3 d (50 °C)  
pH: 9

Degradation half life (DT50): > 31 d

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pH: 5

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Biodegradability : Result: Readily biodegradable.

## 12.3 Bioaccumulative potential

### Product:

Bioaccumulation : Remarks: Does not bioaccumulate.  
Estimation based on data obtained on active ingredient.

### Components:

#### **Chlorantraniliprole:**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 14  
Method: OECD Test Guideline 305  
GLP: yes  
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

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Bioaccumulation : Exposure time: 28 d  
Bioconcentration factor (BCF): < 54  
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : Pow: 0,75

## 12.4 Mobility in soil

### Product:

Distribution among environmental compartments : Remarks: The product is not expected to be mobile in soils.  
Estimation based on data obtained on active ingredient.

### Components:

#### **Chlorantraniliprole:**

Distribution among environmental compartments : Koc: 362 ml/g, log Koc: 2,55



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mental compartments

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.

#### Components:

##### **Chlorantraniliprole:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

#### Product:

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

#### Components:

##### **Chlorantraniliprole:**

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

### 12.7 Other adverse effects

#### Product:

Additional ecological information : See product label for additional application instructions relating to environmental precautions.

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

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### Components:

#### **Chlorantraniliprole:**

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.

## SECTION 14: Transport information

### 14.1 UN number or ID number

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

### 14.2 UN proper shipping name

ADN	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorantraniliprole)
ADR	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorantraniliprole)
RID	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorantraniliprole)
IMDG	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorantraniliprole)

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

### 14.3 Transport hazard class(es)

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

### 14.4 Packing group

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

**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

**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

**ADN**

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Environmentally hazardous : yes

### ADR

Environmentally hazardous : yes

### RID

Environmentally hazardous : yes

### IMDG

Marine pollutant : yes

### IATA (Passenger)

Environmentally hazardous : yes

### IATA (Cargo)

Environmentally hazardous : yes

#### 14.6 Special precautions for user

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

#### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 3

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

Regulation (EC) on substances that deplete the ozone layer : Not applicable

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

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

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

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

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dangerous substances.

### 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 chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements. Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.
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

### 15.2 Chemical safety assessment

A chemical safety assessment is not required for this product (mixture).

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## SECTION 16: Other information

### Full text of H-Statements

H301	: Toxic if swallowed.
H310	: Fatal in contact with skin.
H314	: Causes severe skin burns and eye damage.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H330	: Fatal if inhaled.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
EUH071	: Corrosive to the respiratory tract.

### Full text of other abbreviations

Acute Tox.	: Acute toxicity
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Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Skin Corr.	:	Skin corrosion
Skin Sens.	:	Skin sensitisation
HR OEL	:	Croatia. Regulations on limit values for exposure to hazardous substances at work and on the biological limit values.
HR OEL / GVI	:	time weighted average

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

### Further information

#### Classification of the mixture:

Aquatic Acute 1	H400
Aquatic Chronic 1	H410

#### Classification procedure:

Based on product data or assessment
Calculation method

### Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. You can contact FMC Corporation to ensure that this document is the most current available from FMC Corporation. No warranty of fitness for any

# SAFETY DATA SHEET

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



## VOLIAM®

Version	Revision Date:	SDS Number:	Date of last issue: 11.12.2023
1.3	05.09.2024	50002621	Date of first issue: 09.11.2021

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