

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

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

1.1 Product identifier

Trade name : VOLIAM TARGO
Design code : A15893A

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

Use of the Substance/Mixture : Insecticide

1.3 Details of the supplier of the safety data sheet

Company : Syngenta SA (Pty) Ltd
P.O. Box 1044, No. 4 Krokodil drift Avenue
Brits 0250
South Africa

Telephone : +27 (0)12 2506 300

Telefax : -

E-mail address of person responsible for the SDS : sds.ame@syngenta.com

1.4 Emergency telephone number

Emergency telephone number : +27 (0) 82 446 8946 (Griffon)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Specific target organ toxicity - repeated exposure, Category 2, Nervous system	H373: May cause damage to organs through prolonged or repeated exposure.
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

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled.
H373 May cause damage to organs (Nervous system) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : P102 Keep out of reach of children.

Prevention:

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P314 Get medical advice/ attention if you feel unwell.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)

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 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 2,5 - < 10
poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-	99734-09-5	Aquatic Chronic 3; H412	>= 1 - < 2,5

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2 606-143-00-0	Acute Tox. 2; H300 Acute Tox. 1; H330 Acute Tox. 3; H311 Repr. 2; H361d STOT RE 1; H372 (Nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 <hr/> M-Factor (Acute aquatic toxicity): 10.000 M-Factor (Chronic aquatic toxicity): 10.000	$\geq 1 - < 2,5$
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6 01-2120761540-60-xxxx	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 <hr/> M-Factor (Acute aquatic toxicity): 1	$\geq 0,025 - < 0,05$

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.
- If inhaled : Move the victim to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.
Call a physician or poison control centre immediately.
- In case of skin contact : Take off all contaminated clothing immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.

VOLIAM TARGO

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
1.1	24.10.2022	S1379300751	

Immediate medical attention is required.

If swallowed : If swallowed, seek medical advice immediately and show this container or label.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Lack of coordination
Tremors
Dilatation of the pupil

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : This material is believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic mectin exposure.

Toxicity can be minimized by early administration of chemical absorbents (e.g. activated charcoal).
If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged.
Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Alcohol-resistant foam
or
Water spray

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Further information : Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Do not flush into surface water or sanitary sewer system.
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 : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Clean contaminated surface thoroughly.
Clean with detergents. Avoid solvents.
Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling : No special protective measures against fire required.
Avoid contact with skin and eyes.
When using do not eat, drink or smoke.
For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Further information on storage stability : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

7.3 Specific end use(s)

Specific use(s) : For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
chlorantraniliprole	500008-45-7	TWA	5 mg/m ³	Syngenta
		TWA	10 mg/m ³ (Total dust)	Supplier
		TWA	5 mg/m ³ (Respirable dust)	Supplier
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2	TWA	0,02 mg/m ³	Syngenta

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
	Consumers	Inhalation	Long-term local effects	10 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	30 mg/m ³
	Workers	Inhalation	Long-term local effects	10 mg/m ³
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6,81 mg/m ³
	Workers	Dermal	Long-term systemic effects	0,966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1,2 mg/m ³
	Consumers	Dermal	Long-term systemic effects	0,345 mg/kg

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

Substance name	Environmental Compartment	Value
propane-1,2-diol	Fresh water	260 mg/l
	Marine water	26 mg/l
	Intermittent use/release	183 mg/l
	Sewage treatment plant	20000 mg/l
	Marine sediment	57,2 mg/kg
	Fresh water sediment	572 mg/kg
	Soil	50 mg/kg
1,2-benzisothiazol-3(2H)-one	Fresh water	0,00403 mg/l
	Marine water	0,000403 mg/l
	Sewage treatment plant	1,03 mg/l
	Fresh water sediment	0,0499 mg/kg
	Marine sediment	0,00499 mg/kg

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

	Freshwater - intermittent	0,0011 mg/l
	Marine water - intermittent	0,000110 mg/l
	Soil	3 mg/kg

8.2 Exposure controls

Engineering measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.
Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

- Eye/face protection : No special protective equipment required.
- Hand protection
- Material : Nitrile rubber
- Break through time : > 480 min
- Glove thickness : 0,5 mm
- Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. 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 break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Remove and wash contaminated clothing before re-use.
Wear as appropriate:
Impervious clothing
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Suitable respiratory equipment:
Respirator with a half face mask
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
- Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.
When selecting personal protective equipment, seek appropriate professional advice.

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

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

Appearance	:	liquid
Colour	:	white
Odour	:	like soap, weak
Odour Threshold	:	No data available
pH	:	6,6 Concentration: 1 % w/v
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Method: Pensky-Martens closed cup does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1,05 g/cm ³
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	535 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	38 - 259 mPa.s (20 °C) 31 - 219 mPa.s (40 °C)
Viscosity, kinematic	:	No data available

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Explosive properties : Not explosive
Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Surface tension : 41,0 mN/m, 0,1 %
Particle size : No data available

SECTION 10: Stability and reactivity**10.1 Reactivity**

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Information on likely routes of exposure : Ingestion
Inhalation
Skin contact
Eye contact

Acute toxicity**Product:**

Acute oral toxicity : LD50 (Rat, female): 550 mg/kg
Acute inhalation toxicity : LC50 (Rat, male and female): > 3,394 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Remarks: Highest attainable concentration
Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Components:**chlorantraniliprole:**

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

poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-:

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

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

- Acute oral toxicity : LD50 (Rat, male): 8,7 mg/kg

Acute toxicity estimate: 8,7 mg/kg
Method: Calculation method
- Acute inhalation toxicity : LC50 (Rat, female): > 0,034 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute toxicity estimate: 0,034003 mg/l
Test atmosphere: dust/mist
Method: Calculation method
- Acute dermal toxicity : LD50 (Rat, male): 200 - 300 mg/kg
Assessment: The component/mixture is toxic after single contact with skin.

1,2-benzisothiazol-3(2H)-one:

- Acute oral toxicity : LD50 (Rat, male): 670 mg/kg
- Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation**Product:**

- Species : Rabbit
- Result : No skin irritation

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Components:**chlorantraniliprole:**

Species : Rabbit
Result : No skin irritation

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Species : Rabbit
Result : No skin irritation

1,2-benzisothiazol-3(2H)-one:

Species : Rabbit
Result : Mild skin irritation

Serious eye damage/eye irritation**Product:**

Species : Rabbit
Result : No eye irritation

Components:**chlorantraniliprole:**

Species : Rabbit
Result : No eye irritation

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Species : Rabbit
Result : No eye irritation

1,2-benzisothiazol-3(2H)-one:

Species : Rabbit
Result : Risk of serious damage to eyes.

Respiratory or skin sensitisation**Product:**

Test Type : Buehler Test
Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.

Components:**chlorantraniliprole:**

Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Test Type : Local lymph node assay (LLNA)

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Species : Mouse
Result : Does not cause skin sensitisation.

1,2-benzisothiazol-3(2H)-one:

Result : Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity**Components:****chlorantraniliprole:**

Germ cell mutagenicity-
Assessment : Animal testing did not show any mutagenic effects.

poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-:

Germ cell mutagenicity-
Assessment : In vitro tests did not show mutagenic effects

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Germ cell mutagenicity-
Assessment : Animal testing did not show any mutagenic effects.

1,2-benzisothiazol-3(2H)-one:

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

Carcinogenicity**Components:****chlorantraniliprole:**

Carcinogenicity -
Assessment : No evidence of carcinogenicity in animal studies.

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Carcinogenicity -
Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity**Components:****chlorantraniliprole:**

Reproductive toxicity -
Assessment : No toxicity to reproduction

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Reproductive toxicity -
Assessment : Some evidence of adverse effects on development, based on animal experiments.

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

STOT - single exposure**Components:****chlorantraniliprole:**

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

STOT - repeated exposure**Components:****chlorantraniliprole:**

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

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Target Organs : Nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Aspiration toxicity**Components:****chlorantraniliprole:**

No aspiration toxicity classification

SECTION 12: Ecological information**12.1 Toxicity****Product:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,21 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,006 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 100 mg/l
Exposure time: 96 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 3,2 mg/l
End point: Growth rate
Exposure time: 96 h

Components:**chlorantraniliprole:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 13,8 mg/l

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): > 15,1 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,0116 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 2 mg/l
Exposure time: 96 h

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC: 0,11 mg/l
Exposure time: 90 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,00447 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

NOEC: 0,0025 mg/l
Exposure time: 28 d
Species: Chironomus riparius (harlequin fly)

M-Factor (Chronic aquatic toxicity) : 10

poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 21 mg/l
Exposure time: 96 h

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,0027 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia pulex (Water flea)): 0,00012 mg/l
Exposure time: 48 h

EC50 (Americamysis): 0,000022 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants : ErC50 (Navicula pelliculosa (Freshwater diatom)): > 1 mg/l
Exposure time: 96 h

EC10 (Navicula pelliculosa (Freshwater diatom)): 0,71 mg/l
End point: Growth rate
Exposure time: 96 h

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

M-Factor (Acute aquatic toxicity)	:	10.000
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,00052 mg/l Exposure time: 72 d Species: Oncorhynchus mykiss (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10: 0,0032 µg/l Exposure time: 21 d Species: Daphnia magna (Water flea) NOEC: 0,0022 µg/l Exposure time: 28 d Species: Americamysis
M-Factor (Chronic aquatic toxicity)	:	10.000
1,2-benzisothiazol-3(2H)-one:		
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2,94 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0,15 mg/l Exposure time: 72 h EC10 (Raphidocelis subcapitata (freshwater green alga)): 0,04 mg/l End point: Growth rate Exposure time: 72 h
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,3 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 1,7 mg/l Exposure time: 21 d Species: Daphnia (water flea)

12.2 Persistence and degradability

Components:

chlorantraniliprole:

Biodegradability : Result: Not readily biodegradable.

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Biodegradability : Result: Not readily biodegradable.
Stability in water : Degradation half life: 1,7 d
Remarks: Product is not persistent.

1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: rapidly degradable

12.3 Bioaccumulative potential

Components:

chlorantraniliprole:

Bioaccumulation : Remarks: Does not bioaccumulate.
Partition coefficient: n-octanol/water : log Pow: 2,76 (20 °C)

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Bioaccumulation : Remarks: Does not bioaccumulate.
Partition coefficient: n-octanol/water : log Pow: 4,4

1,2-benzisothiazol-3(2H)-one:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

Components:

chlorantraniliprole:

Distribution among environmental compartments : Remarks: immobile
Stability in soil : Dissipation time: 530 d
Percentage dissipation: 50 (DT50)
Remarks: Persistent in soil.

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Distribution among environmental compartments : Remarks: Slightly mobile in soils
Stability in soil : Dissipation time: 12 - 52 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

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.

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Components:

chlorantraniliprole:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

1,2-benzisothiazol-3(2H)-one:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

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.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents.
Triple rinse containers.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Do not re-use empty containers.

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

UNRTDG : UN 3082
IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

UNRTDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(ABAMECTIN, CHLORANTRANILIPROLE)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(ABAMECTIN AND CHLORANTRANILIPROLE)
IATA : Environmentally hazardous substance, liquid, n.o.s.
(ABAMECTIN AND CHLORANTRANILIPROLE)

14.3 Transport hazard class(es)

UNRTDG : 9
IMDG : 9
IATA : 9

14.4 Packing group

UNRTDG
Packing group : III
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

IMDG

VOLIAM TARGO

Version 1.1 Revision Date: 24.10.2022 SDS Number: S1379300751 This version replaces all previous versions.

Marine pollutant : 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****Other regulations:**

None known.

15.2 Chemical safety assessment

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

SECTION 16: Other information**Full text of H-Statements**

H300 : Fatal if swallowed.
H302 : Harmful if swallowed.
H311 : Toxic in contact with skin.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H330 : Fatal if inhaled.
H361d : Suspected of damaging the unborn child.
H372 : Causes damage to organs through prolonged or repeated exposure.

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.
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
Repr. : Reproductive toxicity
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure

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

VOLIAM TARGO

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
1.1	24.10.2022	S1379300751	

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; 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

Further information

Classification of the mixture:

Acute Tox. 4	H302
Acute Tox. 4	H332
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Based on product data or assessment
Based on product data or assessment
Calculation method
Based on product data or assessment
Calculation method

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.

ZA / EN