

SAFETY DATA SHEET



ABAMECTIN + BIFENTHRIN 50/250 G/L SC (W/ NIPACIDE AS 40)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	2021/05/03	50002348	Date of first issue: 2021/05/03

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : ABAMECTIN + BIFENTHRIN 50/250 G/L SC (W/ NIPACIDE AS 40)

Other means of identification : STARION EXTRA
TALSTAR EXTRA

Manufacturer or supplier's details

Company : FMC Corporation

Address : 2929 WALNUT ST
PHILADELPHIA PA 19104

Número de teléfono en caso de emergencia:

Argentina: 54-1159839431 (CHEMTREC); All other countries: +1 651 / 632-6793 (Collect)

Número de Emergencia Médica:

FMC (General) - (011) 5984-3700; Hospital Nacional Prof. Alejandro Posadas, Centro Nacional de Intoxicaciones. (Toxicología) - 0800- 333 -0160 / (011) 4658-7777 / (011) 4654-6648; Hospital de Niños Ricardo Gutiérrez, Unidad de Toxicología. (Toxicológica) - 0800-444-8694 / (011) 4962-6666 / (011) 4962-2247; Hospital General de Agudos J. A. Fernández ,Unidad de Toxi-cología. (Toxicológica) - (011) 4808-2655 / (011) 4808-2606; TAS ,Toxicología , Asesoramiento y Servicios. (Toxicológica) - 0800-888-8694 / (0341) 4242727; Bomberos (General) – 100; Policía (General) – 101 – 911; Defensa Civil (General) – 103; Emergencias médicas (General) – 107

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 3

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 5

Reproductive toxicity : Category 2

Specific target organ toxicity - : Category 1 (Central nervous system)
single exposure

Specific target organ toxicity - : Category 1 (Nervous system)
repeated exposure

Specific target organ toxicity - : Category 2 (Kidney)
repeated exposure (Oral)

Short-term (acute) aquatic : Category 2
hazard

Long-term (chronic) aquatic : Category 1
hazard

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GHS label elements

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H301 Toxic if swallowed.
H313 May be harmful in contact with skin.
H332 Harmful if inhaled.
H361 Suspected of damaging fertility or the unborn child.
H370 Causes damage to organs (Central nervous system).
H372 Causes damage to organs (Nervous system) through prolonged or repeated exposure.
H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.
H401 Toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

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

Other hazards which do not result in classification

None known.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Chemical name	CAS-No.	Concentration (% w/w)
bifenthrin (ISO)	82657-04-3	≥ 20 -< 25
ethane-1,2-diol	107-21-1	≥ 5 -< 10
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2	$\geq 2,5$ -< 5
Oxirane, methyl-, polymer with oxirane, mono-butyl ether	9038-95-3	≥ 1 -< 5
1,2-benzisothiazol-3(2H)-one	2634-33-5	$\geq 0,025$ -< 0,1
octamethylcyclotetrasiloxane	556-67-2	$\geq 0,025$ -< 0,1

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.
- 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 : Induce vomiting immediately and call a physician.
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.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Toxic if swallowed.
May be harmful in contact with skin.
Harmful if inhaled.
Suspected of damaging fertility or the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.
- Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

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|--|---|---|
| Unsuitable extinguishing media | : | Do not spread spilled material with high-pressure water streams. |
| Specific hazards during fire fighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : | Carbon oxides
Halogenated compounds |
| Specific extinguishing methods | : | 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. |
| Special protective equipment for fire-fighters | : | Wear self-contained breathing apparatus for firefighting if necessary. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.
Ensure adequate ventilation. |
| Accidental Release Measures | : | Pick up and arrange disposal without creating dust.
For disposal considerations see section 13. |
| 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. |
| Methods and materials for containment and cleaning up | : | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal. |

SECTION 7. HANDLING AND STORAGE

- | | | |
|---|---|---|
| Advice on protection against fire and explosion | : | Normal measures for preventive fire protection. |
| Advice on safe handling | : | Avoid formation of aerosol.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations. |

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Conditions for safe storage : Prevent unauthorized access.
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.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethane-1,2-diol	107-21-1	CMP-C (aerosol)	100 mg/m ³	AR OEL
	Further information: Only aerosol, A4 - Not classifiable as a human carcinogen, Irritation			
		TWA (Vapor)	25 ppm	ACGIH
		STEL (Vapor)	50 ppm	ACGIH
		STEL (Inhalable fraction, Aerosol only)	10 mg/m ³	ACGIH

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection
Material : Protective gloves

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

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

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures : Plan first aid action before beginning work with this product.

Hygiene measures : Avoid contact with skin, eyes and clothing.
When using do not eat or drink.
When using do not smoke.

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Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : suspension

Color : white

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : No decomposition if stored and applied as directed.

Conditions to avoid : Avoid dust formation.

Incompatible materials : Strong acids and strong bases

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Toxic if swallowed.

May be harmful in contact with skin.

Harmful if inhaled.

Product:

Acute oral toxicity : LD50 (Rat): > 200 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 1,714 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg

Components:

bifenthrin (ISO):

Acute oral toxicity : LD50 (Rat): 53,4 mg/kg

Acute inhalation toxicity : LC50 (Rat): 1,01 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

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Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

ethane-1,2-diol:

Acute inhalation toxicity : LC0 (Rat, male and female): > 2,5 mg/l
Exposure time: 6 h
Test atmosphere: dust/mist
Remarks: no mortality

Acute dermal toxicity : LD50 (Mouse, male and female): > 3.500 mg/kg

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

Acute oral toxicity : LD50 (Rat): 340 mg/kg
Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat, female): 0,074 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

LC50 (Rat, male): 0,052 - 0,54 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

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

Oxirane, methyl-, polymer with oxirane, monobutyl ether:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): 1 - < 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

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

Acute oral toxicity : LD50 (Rat, male and female): 490 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

octamethylcyclotetrasiloxane:

Acute oral toxicity : LD50 (Rat, male): > 4.800 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male and female): 36 mg/l
Exposure time: 4 h
Test atmosphere: vapor

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Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat, male and female): > 2.500 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : slight irritation

Components:

bifenthrin (ISO):

Species : Rabbit
Result : No skin irritation

ethane-1,2-diol:

Species : Rabbit
Result : No skin irritation

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

Method : OECD Test Guideline 404
Result : slight irritation

Oxirane, methyl-, polymer with oxirane, monobutyl ether:

Result : No skin irritation

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

Species : Rabbit
Exposure time : 72 h
Method : OECD Test Guideline 404
Result : No skin irritation

octamethylcyclotetrasiloxane:

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

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result : slight irritation

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Components:

bifenthrin (ISO):

Result : No eye irritation

ethane-1,2-diol:

Species : Rabbit
Result : No eye irritation

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

Result : slight irritation
Method : OECD Test Guideline 405

Oxirane, methyl-, polymer with oxirane, monobutyl ether:

Result : No eye irritation

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

Species : Bovine cornea
Result : No eye irritation
Method : OECD Test Guideline 437

Species : Rabbit
Result : Irreversible effects on the eye
Method : EPA OPP 81-4

octamethylcyclotetrasiloxane:

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

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Result : Not a skin sensitizer.

Components:

bifenthrin (ISO):

Result : May cause sensitization by skin contact.

ethane-1,2-diol:

Test Type : Maximization Test

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Species : Guinea pig
Result : Does not cause skin sensitization.

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

Method : OECD Test Guideline 406
Result : Not a skin sensitizer.

Oxirane, methyl-, polymer with oxirane, monobutyl ether:

Remarks : No data available

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

Test Type : Maximization Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : May cause sensitization by skin contact.
: Guinea pig
: FIFRA 81.06
: May cause sensitization by skin contact.

octamethylcyclotetrasiloxane:

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

Germ cell mutagenicity

Not classified based on available information.

Components:

bifenthrin (ISO):

Genotoxicity in vitro : Test system: Chinese hamster ovary cells
Result: negative

ethane-1,2-diol:

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: OPPTS 870.5100
Result: negative

Genotoxicity in vivo : Test Type: dominant lethal test
Species: Rat
Application Route: Oral
Result: negative

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

Germ cell mutagenicity - : No genotoxic potential
Assessment

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Oxirane, methyl-, polymer with oxirane, monobutyl ether:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

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

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

Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: positive

Genotoxicity in vivo : Test Type: unscheduled DNA synthesis assay
Species: Rat (male)
Cell type: Liver cells
Application Route: Ingestion
Exposure time: 4 h
Method: OECD Test Guideline 486
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

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

octamethylcyclotetrasiloxane:

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: dominant lethal test
Species: Rat
Application Route: Oral
Result: negative

Carcinogenicity

Not classified based on available information.

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Components:

bifenthrin (ISO):

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

ethane-1,2-diol:

Species : Mouse
Application Route : Oral
Exposure time : 24 month(s)
Result : negative

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

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

octamethylcyclotetrasiloxane:

Species : Rat
Application Route : Inhalation
Exposure time : 24 month(s)
Method : OECD Test Guideline 453
Result : positive
Remarks : No human information is available.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

bifenthrin (ISO):

Effects on fertility : Method: Study for effects on embryo-fetal development
Result: No effects on fertility and early embryonic development were detected.

Effects on fetal development : Method: Study for effects on embryo-fetal development
Result: No teratogenic effects.

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

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

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

Oxirane, methyl-, polymer with oxirane, monobutyl ether:

Effects on fertility : Remarks: No data available

Effects on fetal development : Remarks: No data available

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

Effects on fertility : Species: Rat, male
Application Route: Ingestion
General Toxicity Parent: NOAEL: 18,5 mg/kg body weight
General Toxicity F1: NOAEL: 48 mg/kg body weight
Fertility: NOAEL: 112 mg/kg wet weight
Symptoms: No effects on reproduction parameters.
Method: OPPTS 870.3800
Result: negative

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

octamethylcyclotetrasiloxane:

Effects on fertility : Test Type: Two-generation study
Species: Rat
Application Route: Inhalation
Result: positive

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 414
Result: negative

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

STOT-single exposure

Causes damage to organs (Central nervous system).

Components:

bifenthrin (ISO):

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

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

Remarks : No significant adverse effects were reported

STOT-repeated exposure

Causes damage to organs (Nervous system) through prolonged or repeated exposure.
May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Components:

bifenthrin (ISO):

Target Organs : Nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

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ethane-1,2-diol:

Routes of exposure	: Oral
Target Organs	: Kidney
Assessment	: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

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.

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

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

Components:

bifenthrin (ISO):

Species	: Rat
LOAEL	: 7 - 9 mg/kg
Application Route	: Oral
Exposure time	: 90 d

ethane-1,2-diol:

Species	: Rat
NOAEL	: 150 mg/kg
Application Route	: Oral
Exposure time	: 12 months

Species	: Dog
NOAEL	: > 2.200 - < 4.400 mg/kg
Application Route	: Dermal
Exposure time	: 4 weeks
Method	: OECD Test Guideline 410

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

Species	: Dog
	: 0,5 mg/kg
Application Route	: Oral
Exposure time	: 18 weeks
Method	: OECD Test Guideline 409

Species	: Rat
	: 0,0027 mg/l
Application Route	: Inhalation
Exposure time	: 30 d

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Oxirane, methyl-, polymer with oxirane, monobutyl ether:

Remarks : No data available

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

Species : Rat, male and female
NOAEL : 15 mg/kg
Application Route : Ingestion
Exposure time : 28 d
Method : OECD Test Guideline 407
Symptoms : Irritation

Species : Rat, male and female
NOAEL : 69 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Symptoms : Irritation, Reduced body weight

octamethylcyclotetrasiloxane:

Species : Rabbit
NOAEL : 1.000 mg/kg
Application Route : Dermal
Exposure time : 3 weeks
Method : OECD Test Guideline 410

Aspiration toxicity

Not classified based on available information.

Components:

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

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1,4 mg/l
Exposure time: 96 h

Toxicity to terrestrial organisms : LD50 (Apis mellifera (bees)): > 0,00812 µg/bee
Exposure time: 48 d
Remarks: Contact

LD50 (Coturnix japonica (Japanese quail)): > 2.825 mg/kg

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Components:

bifenthrin (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): .1 Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Crustaceans): .11 Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (algae): 0,822 mg/l Exposure time: 72 h
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): .12 Exposure time: 21 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Crustaceans): 0.0013 Exposure time: 21 d
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to soil dwelling organisms	:	(Eisenia fetida (earthworms)): > 18,9 mg/kg Exposure time: 14 d
Toxicity to terrestrial organisms	:	LD50 (Colinus virginianus (Bobwhite quail)): 1.800 mg/kg LD50 (Apis mellifera (bees)): 0.015 µg/Bee LD50 (Apis mellifera (bees)): 0.1 µg/Bee

ethane-1,2-diol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 72.860 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	IC50 (Pseudokirchneriella subcapitata (green algae)): 10.940 mg/l Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	:	(Menidia peninsulae (tidewater silverside)): 1.500 mg/l Exposure time: 28 d
Toxicity to daphnia and other	:	(Daphnia magna (Water flea)): 33.911 mg/l

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aquatic invertebrates (Chronic toxicity)

Exposure time: 21 d

Toxicity to microorganisms : (activated sludge): > 1.995 mg/l
Exposure time: 30 min
Method: ISO 8192

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

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 0,034 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.1
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Scenedesmus capricornutum (fresh water algae)): 70 mg/l
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): 16 mg/kg
Exposure time: 14 d

Toxicity to terrestrial organisms : LD50 (Apis mellifera (bees)): 0,00083 µg/bee
Exposure time: 48 h

LD50 (Coturnix japonica (Japanese quail)): > 2.000 mg/kg

Oxirane, methyl-, polymer with oxirane, monobutyl ether:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l
Exposure time: 96 h

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

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 16,7 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Oncorhynchus mykiss (rainbow trout)): 2,15 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,9 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

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Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0,070 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,04 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): 24 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

EC50 (activated sludge): 12,8 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

octamethylcyclotetrasiloxane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,022 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0,015 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC10 (Pseudokirchneriella subcapitata (green algae)): 0,022 mg/l
Exposure time: 96 h

EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,022 mg/l
Exposure time: 96 h

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): > 0,0044 mg/l
Exposure time: 93 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 0,015 mg/l
Exposure time: 21 d

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): > 10.000 mg/l
Exposure time: 3 h

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Method: ISO 8192

Persistence and degradability

Components:

bifenthrin (ISO):

Biodegradability : Result: Not readily biodegradable.

ethane-1,2-diol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 90 - 100 %
Exposure time: 10 d
Method: OECD Test Guideline 301A

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

Biodegradability : Result: Not readily biodegradable.
Remarks: It undergoes degradation in the environment and in waste water treatment plants.

Oxirane, methyl-, polymer with oxirane, monobutyl ether:

Biodegradability : Result: Readily biodegradable.

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

Biodegradability : Result: rapidly biodegradable
Method: OECD Test Guideline 301C

octamethylcyclotetrasiloxane:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 3,7 %
Exposure time: 29 d
Method: OECD Test Guideline 310

Bioaccumulative potential

Components:

ethane-1,2-diol:

Partition coefficient: n-octanol/water : log Pow: -1,36

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

Bioaccumulation : Species: Danio rerio (zebra fish)
Bioconcentration factor (BCF): 54
Remarks: See section 9 for octanol-water partition coefficient.
Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 5,5

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octanol/water

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

Bioaccumulation : Species: *Lepomis macrochirus* (Bluegill sunfish)
Bioconcentration factor (BCF): 6,62
Exposure time: 56 d
Method: OECD Test Guideline 305
Remarks: This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Partition coefficient: n-octanol/water : log Pow: 0,7 (20 °C)
pH: 7

log Pow: 0,99 (20 °C)
pH: 5

octamethylcyclotetrasiloxane:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 12.400

Partition coefficient: n-octanol/water : log Pow: 6,49

Mobility in soil

Components:

bifenthrin (ISO):

Distribution among environmental compartments : Remarks: immobile

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

Distribution among environmental compartments : Remarks: Mobile in soils

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

Distribution among environmental compartments : Koc: 9,33, log Koc: 0,97
Method: OECD Test Guideline 121

Other adverse effects

Product:

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.

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- | | | |
|------------------------|---|--|
| Waste from residues | : | 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.
Dispose of as unused product.
Do not re-use empty containers. |

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- | | | |
|----------------------|---|--|
| UN number | : | UN 2810 |
| Proper shipping name | : | TOXIC LIQUID, ORGANIC, N.O.S.
(Abamectin, Bifenthrin) |
| Class | : | 6.1 |
| Packing group | : | III |
| Labels | : | 6.1 |

IATA-DGR

- | | | |
|--|---|--|
| UN/ID No. | : | UN 2810 |
| Proper shipping name | : | Toxic liquid, organic, n.o.s.
(Abamectin, Bifenthrin) |
| Class | : | 6.1 |
| Packing group | : | III |
| Labels | : | Toxic |
| Packing instruction (cargo aircraft) | : | 663 |
| Packing instruction (passenger aircraft) | : | 655 |

IMDG-Code

- | | | |
|----------------------|---|--|
| UN number | : | UN 2810 |
| Proper shipping name | : | TOXIC LIQUID, ORGANIC, N.O.S.
(Abamectin, Bifenthrin) |
| Class | : | 6.1 |
| Packing group | : | III |
| Labels | : | 6.1 |
| EmS Code | : | F-A, S-A |
| Marine pollutant | : | yes |

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

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

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Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

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

Argentina. Carcinogenic Substances and Agents Registry. : Not applicable

Control of precursors and essential chemicals for the preparation of drugs. : sodium hydroxide
sulphuric acid

International Regulations

The ingredients 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.
AICS	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL. 2-METHYLBIPHENYL-3-YLMETHYL (Z)-(1RS,3RS)-3-(2-CHLORO-3,3,3-TRIFLUOROPROP-1-ENYL)-2,2-DIMETHYLCYCLOPROPANECARBOXYLATE Sulfurous acid, monosodium salt, reaction products with cresol-formaldehydenonylphenol polymer (average MW 300-600) abamectin (combination of avermectin B1a and avermectin B1b) (ISO)
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

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

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AR OEL	:	Argentina. Occupational Exposure Limits
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
AR OEL / CMP-C	:	Ceiling value

AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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