

Abamectin (0.6%) Liquid Formulation

Version 1.2 Revision Date: 30.09.2023 SDS Number: 10853000-00003 Date of last issue: 04.04.2023
Date of first issue: 15.09.2022

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Abamectin (0.6%) Liquid Formulation

Manufacturer or supplier's details

Company : MSD

Address : Rua Coronel Bento Soares, 530
Cruzeiro - Sao Paulo - Brazil CEP 12730-340

Telephone : 908-740-4000

Emergency telephone : 1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification in accordance with ABNT NBR 14725 Standard**

Acute toxicity (Oral) : Category 5

Acute toxicity (Inhalation) : Category 4

Eye irritation : Category 2A

Specific target organ toxicity - : Category 2 (Central nervous system)
repeated exposure

Short-term (acute) aquatic : Category 1
hazard

Long-term (chronic) aquatic : Category 1
hazard

GHS label elements in accordance with ABNT NBR 14725 Standard

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H303 May be harmful if swallowed.
H319 Causes serious eye irritation.

Abamectin (0.6%) Liquid Formulation

Version 1.2 Revision Date: 30.09.2023 SDS Number: 10853000-00003 Date of last issue: 04.04.2023
 Date of first issue: 15.09.2022

H332 Harmful if inhaled.
 H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

:

Prevention:

P264 Wash skin thoroughly after handling.
 P273 Avoid release to the environment.
 P280 Wear eye protection/ face protection.

Response:

P312 Call a POISON CENTER/ doctor if you feel unwell.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
 P391 Collect spillage.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Polyalkylene oxide derivative of a synthetic alcohol	103818-93-5	Eye irritation, Category 2A Short-term (acute) aquatic hazard, Category 2	>= 30 -< 50
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2	Acute toxicity (Oral), Category 2 Acute toxicity (Inhalation), Category 1 Acute toxicity (Dermal), Category 3 Reproductive toxicity, Category 2 Specific target organ toxicity - repeated exposure (Oral) (Central nervous system), Category 1 Short-term (acute) aquatic hazard, Category 1 Long-term (chronic) aquatic hazard, Category 1	>= 0,5 -< 1
1-[1,3-Bis(hydroxymethyl)-2,5-dioximidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea	78491-02-8	Acute toxicity (Oral), Category 5 Eye irritation,	>= 0,1 -< 0,25

Abamectin (0.6%) Liquid Formulation

Version 1.2 Revision Date: 30.09.2023 SDS Number: 10853000-00003 Date of last issue: 04.04.2023
 Date of first issue: 15.09.2022

		Category 2A Skin sensitization, Category 1 Short-term (acute) aquatic hazard, Category 2 Long-term (chronic) aquatic hazard, Category 3	
--	--	---	--

SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
 When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
 If not breathing, give artificial respiration.
 If breathing is difficult, give oxygen.
 Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
 Remove contaminated clothing and shoes.
 Get medical attention.
 Wash clothing before reuse.
 Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
 If easy to do, remove contact lens, if worn.
 Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting.
 Get medical attention.
 Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : May be harmful if swallowed.
 Causes serious eye irritation.
 Harmful if inhaled.
 May cause damage to organs through prolonged or repeated exposure.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
 Alcohol-resistant foam
 Carbon dioxide (CO₂)
 Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire : Exposure to combustion products may be a hazard to health.

Abamectin (0.6%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.2	30.09.2023	10853000-00003	Date of first issue: 15.09.2022

fighting
Hazardous combustion products : Carbon oxides

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g., by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.
Do not breathe mist or vapors.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure

Abamectin (0.6%) Liquid Formulation

Version 1.2 Revision Date: 30.09.2023 SDS Number: 10853000-00003 Date of last issue: 04.04.2023
 Date of first issue: 15.09.2022

- assessment
 Keep container tightly closed.
 Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
 When using do not eat, drink or smoke.
 Contaminated work clothing should not be allowed out of the workplace.
 Wash contaminated clothing before re-use.
 The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.
- Conditions for safe storage : Keep in properly labeled containers.
 Keep tightly closed.
 Keep in a cool, well-ventilated place.
 Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:
 Strong oxidizing agents
 Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2	TWA	15 µg/m ³ (OEB 3)	Internal
		Wipe limit	150 µg/100 cm ²	Internal

- Engineering measures** : Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).
 All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
 Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).
 Minimize open handling.

Personal protective equipment

- Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
- Filter type : Particulates type
- Hand protection

Abamectin (0.6%) Liquid Formulation

Version 1.2 Revision Date: 30.09.2023 SDS Number: 10853000-00003 Date of last issue: 04.04.2023
Date of first issue: 15.09.2022

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Eye protection : Wear safety glasses with side shields or goggles.
If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Skin and body protection : Work uniform or laboratory coat.
Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.
Use appropriate degowning techniques to remove potentially contaminated clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : clear
dark blue

Odor : No data available

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Abamectin (0.6%) Liquid Formulation

Version 1.2 Revision Date: 30.09.2023 SDS Number: 10853000-00003 Date of last issue: 04.04.2023
Date of first issue: 15.09.2022

Density : No data available

Solubility(ies)
Water solubility : No data available

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

Molecular weight : No data available

Particle size : Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Can react with strong oxidizing agents.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

May be harmful if swallowed.
Harmful if inhaled.

Product:

Acute oral toxicity : Acute toxicity estimate: 4.001 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 3,83 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Abamectin (0.6%) Liquid Formulation

Version 1.2 Revision Date: 30.09.2023 SDS Number: 10853000-00003 Date of last issue: 04.04.2023
Date of first issue: 15.09.2022

Acute dermal toxicity : Acute toxicity estimate: > 5.000 mg/kg
Method: Calculation method

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

Acute oral toxicity : LD50 (Rat): 24 mg/kg
LD50 (Mouse): 10 mg/kg
LDLo (Monkey): 24 mg/kg
Symptoms: Dilatation of the pupil

Acute inhalation toxicity : LC50 (Rat): 0,023 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): 330 mg/kg
LD50 (Rabbit): 2.000 mg/kg

1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OPPTS 870.1100

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Method: OPPTS 870.1200
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:**Polyalkylene oxide derivative of a synthetic alcohol:**

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 439

Result : No skin irritation

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

Species : Rabbit
Result : No skin irritation

1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

Species : Rabbit
Result : No skin irritation

Abamectin (0.6%) Liquid Formulation

Version 1.2 Revision Date: 30.09.2023 SDS Number: 10853000-00003 Date of last issue: 04.04.2023
Date of first issue: 15.09.2022

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:**Polyalkylene oxide derivative of a synthetic alcohol:**

Species : Bovine cornea
Method : OECD Test Guideline 437

Result : Irritation to eyes, reversing within 21 days

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

Species : Rabbit
Result : Mild eye irritation

1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days

Respiratory or skin sensitization**Skin sensitization**

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

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

Test Type : Maximization Test
Routes of exposure : Skin contact
Result : Not a skin sensitizer.

1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

Test Type : Human repeat insult patch test (HRIPT)
Routes of exposure : Skin contact
Result : positive

Assessment : Probability or evidence of skin sensitization in humans

Germ cell mutagenicity

Not classified based on available information.

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

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster lung cells
Result: negative

Abamectin (0.6%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.2	30.09.2023	10853000-00003	Date of first issue: 15.09.2022

Test Type: Alkaline elution assay
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: positive

Test Type: Chromosome aberration test in vitro
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative

Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 486
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

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

Species : Rat
Application Route : Oral
Exposure time : 105 weeks
Result : negative

Species : Mouse
Application Route : Oral
Exposure time : 93 weeks
Result : negative

Abamectin (0.6%) Liquid Formulation

Version 1.2 Revision Date: 30.09.2023 SDS Number: 10853000-00003 Date of last issue: 04.04.2023
Date of first issue: 15.09.2022

Reproductive toxicity

Not classified based on available information.

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

- Effects on fertility : Test Type: Fertility
Species: Rat, male
Application Route: Oral
Result: Effects on fertility.
- Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Oral
Early Embryonic Development: NOAEL: 0,12 mg/kg body weight
Result: Fetotoxicity.
- Effects on fetal development : Test Type: Embryo-fetal development
Species: Mouse
Application Route: Oral
General Toxicity Maternal: NOAEL: 0,05 mg/kg body weight
Developmental Toxicity: NOAEL: 0,2 mg/kg body weight
Result: Cleft palate
Remarks: Adverse developmental effects were observed
- Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Oral
Developmental Toxicity: LOAEL: 2 mg/kg body weight
Result: Cleft palate, Teratogenic effects., Reduced embryonic survival
Remarks: Adverse developmental effects were observed
- Test Type: Development
Species: Rat
Application Route: Oral
Developmental Toxicity: LOAEL: 1,6 mg/kg body weight
Result: Teratogenic effects.
- Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of adverse effects on development, based on animal experiments.

1-[1,3-Bis(hydroxymethyl)-2,5-dioximidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

- Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative
- Test Type: Embryo-fetal development
Species: Rat

Abamectin (0.6%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.2	30.09.2023	10853000-00003	Date of first issue: 15.09.2022

Application Route: Skin contact

Result: negative

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

Components:

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

Routes of exposure	: Ingestion
Target Organs	: Central nervous system
Assessment	: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

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

Species	: Rat
NOAEL	: 1,5 mg/kg
Application Route	: Oral
Exposure time	: 24 Months
Target Organs	: Central nervous system
Symptoms	: Tremors, ataxia

Species	: Mouse
NOAEL	: 4,0 mg/kg
Application Route	: Oral
Exposure time	: 24 Months
Target Organs	: Central nervous system
Symptoms	: Tremors, ataxia

Species	: Dog
NOAEL	: 0,25 mg/kg
LOAEL	: 0,5 mg/kg
Application Route	: Oral
Exposure time	: 53 Weeks
Target Organs	: Central nervous system
Symptoms	: Tremors, weight loss
Remarks	: mortality observed

Species	: Monkey
NOAEL	: 1,0 mg/kg
Application Route	: Oral
Exposure time	: 14 Weeks
Target Organs	: Central nervous system

1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

Species	: Rat
NOAEL	: 200 mg/kg

Abamectin (0.6%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.2	30.09.2023	10853000-00003	Date of first issue: 15.09.2022

Application Route : Ingestion
Exposure time : 92 Days

Aspiration toxicity

Not classified based on available information.

Experience with human exposure

Components:

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

Ingestion : Symptoms: May cause, Tremors, Diarrhea, central nervous system effects, Salivation, tearing

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Polyalkylene oxide derivative of a synthetic alcohol:

Toxicity to fish : LC50 : > 1 - 10 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 3,2 mg/l
aquatic invertebrates : Exposure time: 48 h
Method: OECD Test Guideline 202

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

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 3,2 µg/l
Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): 9,6 µg/l
Exposure time: 96 h

LC50 (Ictalurus punctatus (channel catfish)): 24 µg/l
Exposure time: 96 h

LC50 (Cyprinus carpio (Carp)): 42 µg/l
Exposure time: 96 h

LC50 (Cyprinodon variegatus (sheepshead minnow)): 15 µg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Americamysis): 0,022 µg/l
aquatic invertebrates : Exposure time: 96 h

EC50 (Daphnia magna (Water flea)): 0,34 µg/l
Exposure time: 48 h

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): 100
plants : mg/l
Exposure time: 72 h

Abamectin (0.6%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.2	30.09.2023	10853000-00003	Date of first issue: 15.09.2022

M-Factor (Acute aquatic toxicity) : 10.000

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0,52 µg/l
Exposure time: 32 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0,03 µg/l
Exposure time: 21 d

NOEC (Mysidopsis bahia (opossum shrimp)): 0,0035 µg/l
Exposure time: 28 d

M-Factor (Chronic aquatic toxicity) : 10.000

Toxicity to microorganisms : EC50: > 1.000 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition

1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): > 67 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 58 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 5,78 mg/l
Exposure time: 72 h
Method: Regulation (EC) No. 440/2008, Annex, C.3

NOEC (Pseudokirchneriella subcapitata (green algae)): 1,6 mg/l
Exposure time: 72 h
Method: Regulation (EC) No. 440/2008, Annex, C.3

Toxicity to microorganisms : EC50 (activated sludge): 567 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Persistence and degradability

Components:

Polyalkylene oxide derivative of a synthetic alcohol:

Biodegradability : Result: Readily biodegradable.
Remarks: Based on data from similar materials

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

Stability in water : Hydrolysis: 50 %(< 12 h)

1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

Biodegradability : Result: Not readily biodegradable.

Abamectin (0.6%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.2	30.09.2023	10853000-00003	Date of first issue: 15.09.2022

Biodegradation: 24 %
 Exposure time: 28 d
 Method: Directive 67/548/EEC Annex V, C.4.C.

Bioaccumulative potential

Components:

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

Bioaccumulation : Bioconcentration factor (BCF): 52

Partition coefficient: n- : log Pow: 4
 octanol/water

1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:

Partition coefficient: n- : log Pow: < 0,9
 octanol/water Method: OECD Test Guideline 117

Mobility in soil

Components:

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

Distribution among environ- : log Koc: > 3,6
 mental compartments

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer.
 Dispose of in accordance with local regulations.
 Contaminated packaging : Empty containers should be taken to an approved waste
 handling site for recycling or disposal.
 If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S.
 (abamectin (combination of avermectin B1a and avermectin
 B1b) (ISO))
 Class : 9
 Packing group : III
 Labels : 9
 Environmentally hazardous : no

IATA-DGR

UN/ID No. : UN 3082

Abamectin (0.6%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.2	30.09.2023	10853000-00003	Date of first issue: 15.09.2022

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(abamectin (combination of avermectin B1a and avermectin B1b) (ISO))

Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964

IMDG-Code

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(abamectin (combination of avermectin B1a and avermectin B1b) (ISO))

Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

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

Not applicable for product as supplied.

Domestic regulation

ANTT

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(abamectin (combination of avermectin B1a and avermectin B1b) (ISO))

Class : 9
Packing group : III
Labels : 9
Hazard Identification Number : 90

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.

SECTION 15. REGULATORY INFORMATION

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

National List of Carcinogenic Agents for Humans - (LINACH) : Not applicable

Brazil. List of chemicals controlled by the Federal Police : Not applicable

Abamectin (0.6%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.2	30.09.2023	10853000-00003	Date of first issue: 15.09.2022

The ingredients of this product are reported in the following inventories:

AICS	:	not determined
DSL	:	not determined
IECSC	:	not determined

SECTION 16. OTHER INFORMATION

Revision Date	:	30.09.2023
Date format	:	dd.mm.yyyy

Further information

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
--	---	---

Full text of other abbreviations

AllC - 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; 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; WHMIS - Workplace Hazardous Materials Information System

Abamectin (0.6%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.2	30.09.2023	10853000-00003	Date of first issue: 15.09.2022

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

BR / Z8