

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## Abamectin (0.6%) Liquid Formulation

Version 4.0      Revision Date: 06/17/2025      SDS Number: 10852650-000007      Date of last issue: 04/14/2025  
Date of first issue: 09/15/2022

### SECTION 1. IDENTIFICATION

Product name : Abamectin (0.6%) Liquid Formulation  
Other means of identification : COOPERS MAVERICK POUR ON FOR SHEEP (61710)

#### Manufacturer or supplier's details

Company name of supplier : Merck & Co., Inc  
Address : 126 E. Lincoln Avenue  
Rahway, New Jersey U.S.A. 07065  
Telephone : 908-740-4000  
Emergency telephone : 1-908-423-6000  
E-mail address : EHSDATASTEWARD@merck.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 the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Inhalation) : Category 4  
Eye irritation : Category 2A  
Skin sensitization : Category 1  
Reproductive toxicity : Category 2  
Specific target organ toxicity - repeated exposure : Category 2 (Central nervous system)

#### Other hazards

None known.

#### GHS label elements

Hazard pictograms	:  
Signal Word	: Warning
Hazard Statements	: H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

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### 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 mist or vapors.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear protective gloves, protective clothing, eye protection and face protection.

#### : Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical attention.  
P333 + P313 If skin irritation or rash occurs: Get medical attention.  
P337 + P313 If eye irritation persists: Get medical attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

#### : Storage:

P405 Store locked up.

#### : Disposal:

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

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Polyalkylene oxide derivative of a synthetic alcohol	103818-93-5*	>= 30 - <= 60	TSC
Propylene glycol	57-55-6*	>= 10 - <= 30	TSC
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2*	>= 0.1 - <= 1	TSC
1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea	78491-02-8*	>= 0.1 - <= 1	TSC

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\* Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

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### SECTION 4. FIRST AID MEASURES

- |                                                             |                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice                                              | : In the case of accident or if you feel unwell, seek medical advice immediately.<br>When symptoms persist or in all cases of doubt seek medical advice.                                                                                          |
| If inhaled                                                  | : If inhaled, remove to fresh air.<br>If not breathing, give artificial respiration.<br>If breathing is difficult, give oxygen.<br>Get medical attention.                                                                                         |
| In case of skin contact                                     | : In case of contact, immediately flush skin with soap and plenty of water.<br>Remove contaminated clothing and shoes.<br>Get medical attention.<br>Wash clothing before reuse.                                                                   |
| In case of eye contact                                      | : Thoroughly clean eyes before reuse.<br>In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.<br>If easy to do, remove contact lens, if worn.<br>Get medical attention.                                       |
| If swallowed                                                | : If swallowed, DO NOT induce vomiting.<br>Get medical attention.<br>Rinse mouth thoroughly with water.                                                                                                                                           |
| Most important symptoms and effects, both acute and delayed | : May cause an allergic skin reaction.<br>Causes serious eye irritation.<br>Harmful if inhaled.<br>Suspected of damaging fertility. Suspected of damaging the unborn child.<br>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.                                                                                                                                                                                                         |

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### SECTION 5. FIRE-FIGHTING MEASURES

- |                                       |                                                                                              |
|---------------------------------------|----------------------------------------------------------------------------------------------|
| Suitable extinguishing media          | : Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO <sub>2</sub> )<br>Dry chemical |
| Unsuitable extinguishing media        | : None known.                                                                                |
| Specific hazards during fire fighting | : Exposure to combustion products may be a hazard to health.                                 |
| Hazardous combustion products         | : Carbon oxides                                                                              |

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- 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.

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## 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.

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## 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

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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
Propylene glycol	57-55-6	TWA	10 mg/m <sup>3</sup>	US WEEL
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2	TWA	15 µg/m <sup>3</sup> (OEB 3)	Internal
		Wipe limit	150 µg/100 cm <sup>2</sup>	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** : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

**Hand protection**

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Material	: Chemical-resistant gloves		
Remarks Eye protection	<ul style="list-style-type: none"><li>: Consider double gloving.</li><li>: Wear safety glasses with side shields or goggles.</li><li>If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.</li><li>Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.</li></ul>		
Skin and body protection	<ul style="list-style-type: none"><li>: Work uniform or laboratory coat.</li><li>Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.</li><li>Use appropriate degowning techniques to remove potentially contaminated clothing.</li></ul>		
Hygiene measures	<ul style="list-style-type: none"><li>: If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.</li><li>When using do not eat, drink or smoke.</li><li>Contaminated work clothing should not be allowed out of the workplace.</li><li>Wash contaminated clothing before re-use.</li><li>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.</li></ul>		

## 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

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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
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 characteristics		
Particle size	:	Not applicable

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## 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.

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Harmful if inhaled.

#### Product:

Acute oral toxicity	: Acute toxicity estimate: 4,000 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
Acute dermal toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

#### Components:

##### Propylene glycol:

Acute oral toxicity	: LD50 (Rat): 22,000 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 44.9 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

##### 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

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

- |                       |                                                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Acute oral toxicity   | : LD50 (Rat): > 2,000 mg/kg<br>Method: OPPTS 870.1100                                                                         |
| Acute dermal toxicity | : LD50 (Rabbit): > 2,000 mg/kg<br>Method: OPPTS 870.1200<br>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                  |

#### Propylene glycol:

- |         |                           |
|---------|---------------------------|
| Species | : Rabbit                  |
| Method  | : OECD Test Guideline 404 |
| 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 |

### 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 |

#### Propylene glycol:

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

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### 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

May cause an allergic skin reaction.

#### Respiratory sensitization

Not classified based on available information.

#### Components:

##### Propylene glycol:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative

### 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:

##### Propylene glycol:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
		Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)

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Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative

### 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
	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.

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### Components:

#### **Propylene glycol:**

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

#### **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

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### **Reproductive toxicity**

Suspected of damaging fertility. Suspected of damaging the unborn child.

### Components:

#### **Propylene glycol:**

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Mouse Application Route: Ingestion Result: negative
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Effects on fetal development	:	Test Type: Embryo-fetal development Species: Mouse Application Route: Ingestion Result: negative
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#### **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.
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Test Type: Two-generation reproduction toxicity study  
Species: Rat

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		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.
<b>1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:</b>		
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat Application Route: Ingestion Result: negative
		Test Type: Embryo-fetal development Species: Rat 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
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Target Organs Assessment	:	Central nervous system
	:	Causes damage to organs through prolonged or repeated exposure.

### Repeated dose toxicity

#### Components:

##### **Propylene glycol:**

Species	:	Rat, male
NOAEL	:	>= 1,700 mg/kg
Application Route	:	Ingestion
Exposure time	:	2 y

##### **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
Application Route	:	Ingestion
Exposure time	:	92 Days

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### 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
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## 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
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Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 3.2 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
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#### **Propylene glycol:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	: ErC50 (Skeletonema costatum (marine diatom)): 19,300 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l Exposure time: 7 d
Toxicity to microorganisms	: NOEC (Pseudomonas putida): > 20,000 mg/l Exposure time: 18 h

##### **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

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	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 aquatic invertebrates	: EC50 (Americamysis): 0.022 µg/l Exposure time: 96 h
	EC50 (Daphnia magna (Water flea)): 0.34 µg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): 100 mg/l Exposure time: 72 h
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
Toxicity to microorganisms	: EC50: > 1,000 mg/l Exposure time: 3 h Test Type: Respiration inhibition
<b>1-[1,3-Bis(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]-1,3-bis(hydroxymethyl)urea:</b>	
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	: EC50 (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

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### Persistence and degradability

#### Components:

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

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

##### **Propylene glycol:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 98.3 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

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

### Bioaccumulative potential

#### Components:

##### **Propylene glycol:**

Partition coefficient: n-octanol/water : log Pow: -1.07  
Method: Regulation (EC) No. 440/2008, Annex, A.8

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

Bioaccumulation : Bioconcentration factor (BCF): 52

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

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

Partition coefficient: n-octanol/water : log Pow: < 0.9  
Method: OECD Test Guideline 117

### Mobility in soil

#### Components:

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

Distribution among environmental compartments : log Koc: > 3.6

### Other adverse effects

No data available

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### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

- Waste from residues : Dispose of in accordance with local regulations.  
Do not dispose of waste into sewer.
- 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.

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### 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
- 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 IMO instruments

Not applicable for product as supplied.

#### Domestic regulation

49 CFR

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UN/ID/NA 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	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	yes(abamectin (combination of avermectin B1a and avermectin B1b) (ISO))
Remarks	:	Above applies only to containers over 119 gallons or 450 liters.  Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

### 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

### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	Acute toxicity (any route of exposure) Respiratory or skin sensitization Reproductive toxicity Specific target organ toxicity (single or repeated exposure) Serious eye damage or eye irritation
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SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
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### US State Regulations

#### Pennsylvania Right To Know

Water	7732-18-5
Polyalkylene oxide derivative of a synthetic alcohol	103818-93-5
Propylene glycol	57-55-6

#### California Prop. 65

WARNING: This product can expose you to chemicals including abamectin (combination of avermectin B1a and avermectin B1b) (ISO), which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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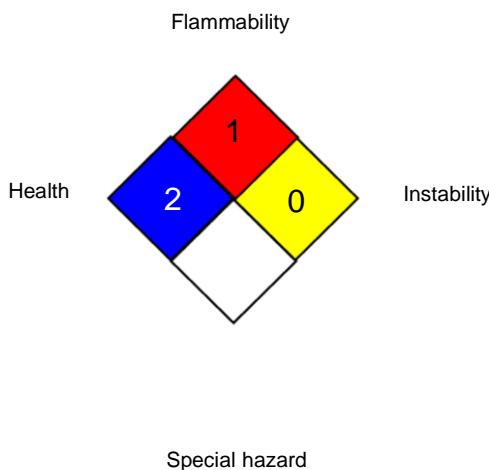
**The ingredients of this product are reported in the following inventories:**

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

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



#### HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
US WEEL / TWA	:	8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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

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50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; 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

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/>

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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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.

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