

Precautionary statements:**Prevention:**

- P264 Wash hands thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear eye protection/face protection.
 P273 Avoid release to the environment.

Response:

- P301 + P312 IF SWALLOWED: Call a poison center/doctor if you feel unwell.
 P330 Rinse mouth.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 Call a poison center/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.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P314 Get medical advice/attention if you feel unwell.
 P391 Collect spillage.

Storage: See section 7 for storage information.

Disposal:

- P501 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, Regional, national and/or international regulations.

Routes of exposure: Eyes, skin, ingestion & inhalation.

Carcinogenicity: Abamectin: Not carcinogenic (rat); Not listed by ACGIH, NTP, IARC, or OSHA.

Other health concerns

NFPA Ratings: Health-2 Flammability-1 Reactivity-1

[3. Composition / Information on Ingredients]

According to Hazard Communication Standard (HCS) or 29 CFR §1910.1200 (2012).

Active ingredient	CAS No.	EINECS #	Content (w/w,%)
Abamectin (Avermectin B1a) (Avermectin B1b)	71751-41-2 (65195-55-3) (65195-56-4)	200-096-6	1.9 min.
Butyl polyoxyakline ether	9038-95-3	NE	23.0
Propylene glycol	57-55-6	200-338-0	20.0
Ethoxylated castor oil	61791-12-6	NE	14
Fatty acid dimethylamides (C ₁₀ and C ₈)	NE	NE	13
Butylated Hydroxytoluene (BHT)	128-37-0	204-881-4	0.5
Water	7732-18-5	231-791-2	Balance

[4. First aid measures]

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information.

If inhaled: Move to fresh air free from risk of further exposure. If the exposed person is not breathing call 9-1-1, then apply rescue breathing. Seek medical attention as soon as possible.

If on skin: Rinse area with clean water for 15-20 minutes. Call poison control center or doctor for treatment advice.

Take off contaminated clothing and wash before reuse.

If in eyes: Flush with clean, lukewarm water raising upper and lower eyelids at low pressure for 15-minutes. Remove contact lenses, if present, after the first five minutes and continue to rinse the eyes. Seek medical attention if no relief.

If swallowed: Call a poison control center or doctor immediately for treatment advice. DO NOT INDUCE VOMITING. Lower the head when person is vomiting to minimize entry into throat and lungs.

Most important symptoms/effects, acute and delayed: No information available.

Note to physician: There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. Poisoning is accompanied by hyperactivity followed by sedation.

[5. Fire-Fighting measures]

Suitable extinguishing media: Extinguish fire using foam blanket, carbon dioxide or dry agent. If not available, use waterfog or fine water spray but ensure all runoff is contained.

Unsuitable extinguishing media: No data available.

Special hazards arising from the chemical (hazardous combustion products): Can decompose at high temperatures forming toxic gases. Under fire conditions may produce oxides of carbon and hydrogen.

Special protective equipment and precautions for fire-fighters: A self-contained breathing apparatus and suitable protective clothing must be worn in fire conditions.

Advice for firefighters: Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

[6. Accidental release measures]

Personal precautions, protective equipment and emergency procedures:

Wear PPE; see section 8. Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Environmental precautions:

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply where runoff is likely. Do not apply where when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment wash water or rinsate. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Methods and materials for containment and cleaning up:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

[7. Handling and Storage]

KEEP OUT OF REACH OF CHILDREN!

Precautions for safe handling:

No smoking. Eating or drinking should be allowed where material is used or stored. Wear protective equipment to prevent skin and eye contamination.

When opening the container, preparing spray and using prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves and goggles. For space applications, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, goggles and half facepiece respirator with dust cartridge or canister.

Avoid release to the environment.

Conditions for safe storage:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Keep cool. Keep away from heat/sparks/open flames/hot surfaces. Do not use or store near heat or open flame. Do not store food, beverages or tobacco products in the storage area.

[8. Exposure controls / Personal protection]**Control parameters:**

Components.	CAS-No	Control parameters	Basis
Abamectin	71751-41-2	None Not Established	N/A
Propylene glycol	57-55-6	10 mg/m ³	ACGIH-TWA
Butylated Hydroxytoluene (BHT)	128-37-0	2 mg/m ³	ACGIH-TWA

Appropriate engineering controls: Use in ventilated areas. Keep containers closed when not in use.

Personal protective equipment:

Always follow the label instructions when handling this product. In all other cases the following recommendations would apply. Long sleeve shirt and long pants. Socks and shoes. Chemical-resistant gloves made out of barrier laminate, nitrile rubber ≥ 14 mils, neoprenorubber ≥ 14 mils, viton ≥ 14 mils Protective eyewear. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Respiratory protection: A combination particulate/ organic vapor respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with an HE prefilter.

Eye protection: Use safety glasses or goggles, there is potential for vapor or mist exposure to cause injury to the eyes. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin and body protection: Skin and Body Protection: To avoid contact with skin, wear coveralls over with long- or short-sleeved shirt and long or short pants, chemical-resistant footwear plus socks and chemical resistant gloves. Wear chemical-resistant apron when cleaning equipment, mixing or loading. For overhead exposure, wear chemical-resistant headgear. An emergency eyewash or water supply should be readily accessible to the work area.

Hand Protection: Chemical resistant gloves.

Specific Hygiene Measures: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash clothing and other absorbent materials that have been exposed to this product. Follow the manufacturer's instructions for cleaning and maintaining PPE.

[9. Physical and chemical properties]

Appearance: Pale amber liquid.

Odor: Slightly pungent odor.

Odor threshold: No data available.

pH: 3.5-5.5.

Melting point/freezing point: No data available.

Initial boiling point and boiling range: No data available.

Flash point: $>225^{\circ}\text{C}$ (102.2°C).

Evaporation rate: No data available.

Flammability: Combustible Liquid.

Upper/lower flammability or explosive limits: No data available.

Vapor pressure: 7.5×10^{-8} mmHg @ 77°F (25°C), abamectin.

Vapor density: No data available.

Density: .1.01g/cm³.

Solubility: Emulsifies.

Partition coefficient: n-octanol/water: log Kow = 4.4 at pH 7.2 at 68°F (20°C).

Auto-ignition temperature: No data available.

Decomposition temperature: No data available.

Viscosity: 135 cps at 24t, 70cps at 39t.

Note: These physical data are typical values based on material test but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis and any specific lot or as a specification.

[10. Stability and reactivity]

Reactivity: Product will not undergo polymerization.

Chemical Stability: Stable under normal use and storage conditions.

Possibility of hazardous reactions: Will not occur hazardous polymerization.

Conditions to avoid: Excessive heat, sparks and open flame.

Incompatible Materials: None reasonably foreseeable.

Hazardous decomposition products: Can decompose at high temperatures forming toxic gases. Under fire conditions may produce oxides of carbon and hydrogen.

[11. Toxicological information]

Exposure routes: Eyes, skin, ingestion & inhalation.

Toxicity:

Acute oral toxicity: LD₅₀ for female rat 1750mg/kg b.w.

Acute dermal toxicity: LD₅₀ for rabbits >5050mg/kg b.w.

Acute inhalation toxicity: LC₅₀ (4hr) >2.56mg/L (no deaths).

Skin irritation: No skin irritation.

Eye irritation: Severely irritating to eyes (rabbits).

Sensitization: No skin sensitizing reaction in guinea pig.

Chronic Toxicity: Abamectin: Central nervous system effects in animals.

Carcinogenicity: Abamectin: Not carcinogenic (rat); Not listed by ACGIH, NTP, IARC, or OSHA.

Reproduction: Abamectin: No teratogenic potential.

Developmental Toxicity: Abamectin: Animal tests with metsulfuron-methyl have not demonstrated developmental effects.

Neurotoxicity: Abamectin: No evidence of neurotoxicity.

Mutagenicity: Abamectin: Negative.

[12. Ecological information]

Ecotoxicity:

Highly toxic to fish, invertebrates, birds and bees. Not bioconcentrateable in fish.

Avian toxicity: Abamectin

Bird (Bobwhite Quail) LD₅₀ Oral > 2000 mg/kg b.w.

Birds (8-day dietary - Bobwhite Quail) LC₅₀/EC₅₀: 3102 ppm.

Birds (8-day dietary - Mallard Duck) LC₅₀/EC₅₀: 383 ppm.

Aquatic organism toxicity: Abamectin

LC₅₀ to rainbow trout 0.046mg/L (96hr). EC₅₀ to daphnia 0.405µg/L (48hr).

Invertebrates (Water Flea) LC₅₀/EC₅₀: 0.00037 ppm.

Other non-target organism toxicity: Abamectin

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Bees: Bees contact LC₅₀/EC₅₀ 0.002 ug/bee, oral LD₅₀ of 0.009 ug/bee.

Worms: Earthworms will not be adversely affected by use of abamectin at recommended application rates. The 28-day

LC₅₀ for abamectin in earthworms is 28 ppm.

Persistence/Degradability: Not persistent in soil.

Bioaccumulative potential: Low bioaccumulation potential.

Mobility in soil: Low mobility in soil.

Other adverse effects: No Data Available.

Environmental precautions:

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply where runoff is likely. Do not apply where when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment wash water or rinsate. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

[13. Disposal considerations]

Dispose of product containers, water containers, and residues according to local regulations.

Pesticide disposal:

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal:

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

[14. Transport information]

Ground transport:

Not Regulated by US DOT

Transport by sea (IMDG)

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Abamectin); 9; III; Marine pollutant

Air transport (ICAO/IATA)

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Abamectin); 9; III;

Additional Air, Sea and International transportation information

UN-No: 3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Abamectin)

Transport document description: UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Abamectin), 9, III

Hazardous class: 9

Packing group: III

Marine Pollutant (Y/N): Y

[15. Regulatory information]

FIFRA

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard

information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

EPA Reg. No.: 84229-2

EPA Signal word: Warning

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Harmful if absorbed through skin or if swallowed. Avoid contact with skin.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment wash water or rinsate.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Use of this product may pose a risk to threatened and endangered species of fish, amphibians, crustaceans (including fresh water shrimp), and insects. All use of this product in the state of California should comply with the recommendations of the California Endangered Species Project. Before using this product in California, consult with your county agriculture commissioner to determine use limitations that apply in your area.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a medium potential for reaching both surface water and aquatic sediment via runoff for several weeks to months after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of abamectin from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecast to occur within 48 hours.

PHYSICAL OR CHEMICAL HAZARDS

Combustible: Do not use or store near heat or open flame.

US Federal Regulations

TSCA list: All components are listed or exempted.

SARA Title III - section 302 - notification and information: None.

SARA Title III - section 313 - toxic chemical release reporting: None.

SARA Title III - section 311/312 - hazard identification

Acute health hazardous

Chronic health hazardous

This product contains none of the components listed as Extremely Hazardous substances.

OSHA Hazardous Components:

Butylated hydroxytoluene (CAS# 128-37-0)

US States Regulatory Reporting

CA Prop65

This product contains substances (abamectin) known to the State of California to cause reproductive harm.

State information:

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities.

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

Environmental

CERCLA

None of the chemicals in this material have an RQ.

[16. Other information]

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. Tide International USA, Inc. assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of these data.