

AKRIMACTIN 1.8EC™

MATERIAL SAFETY DATA SHEET

SECTION 1 Chemical product and Company identification

Product Name: Akrimactin 1.8 EC™ (Abamectin)

Chemical name: 5-O-demethylavermectin A_{1a} (i) mixture with 5-O-demethyl-25-de(1-methylpropyl)-25-(1-methylethyl) avermectin

Chemical Family: Avermectin

Formula: C₄₈H₇₂O₁₄ (avermectin B1a); C₄₇H₇₀O₁₄ (avermectin B1b)

Product Use: Commercial Insecticide and acaricide.

SECTION 2 Composition/Information on Ingredients

Chemical Name	Wt. %	CAS RN
Abamectin	1.8	71751-41-2

SECTION 3 Hazards Identification

Effect on exposure

Eyes: May cause some reversible irritation. Caused slight conjunctival irritation in albino rabbits, reversible in 7 days. Caused a dull cornea in albino rabbits in 3 days.

Skin: non irritation.

Ingest: Acute and chronic health effects in human is unknown. Abamectin is highly toxic.

Explanation of carcinogenicity: non-relevant

Signs and symptoms of overexposure: ingestion in animal studies, causing central nervous system effects.



SECTION 4 First Aid Measures

Ingest: Drink 1-2 glasses of water, induce vomit by touching back or throat with fingers. Do not induce vomit or give anything by mouth to an unconscious person. Get medical attention.

Inhalation: Remove to fresh air. Apply artificial respiration if indicated. Seek medical attention.

Skin: Wash with soap and water. Seek medical attention if irritation continues.

Eyes: Flush with plenty of water for at least 15 min. Seek medical attention if irritation persists.

SECTION 5 Fire Fighting Measures

Extinguishing media: Carbon dioxide, dry chemical.

Fire-fighting procedures: Use protective equipment. Avoid creating significant airborne dust.

Unusual fire/explosion hazard: Can form an explosive mixture in air, if lower explosive limit is met.

SECTION 6 Accidental release measures

In Case of Spill or Leak: Wear goggles, rubber gloves, rubber boots, long-sleeved shirt, long pants, head covering and a NIOSH-approved chemical cartridge respirator with pesticide pre-filter, or air supplied respirator. For small spills, cover the Spill with an absorbent material such as pet litter, sweep up and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal container and handle in an approved manner. Flush the spill area with water to remove any residue. Do not allow wash water to contaminate water supplies.

SECTION 7 Handling and storage

Store the material in a well-ventilated, secure area out of the reach of children and domestic animals. Do not store food, beverages, or tobacco products in the storage area. Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.

To avoid eye contact, wear chemical safety glasses or goggles.

To avoid skin contact, wear rubber gloves, rubber boots, long-sleeved shirt, long pants and head covering. Discard heavily contaminated articles that cannot be washed.

To avoid breathing spray or mist, wear a NIOSH-approved chemical cartridge respirator with organic vapor cartridge and pesticide pre-filter or air-supplied respirator.



SECTION 8 Exposure controls/Personal protection

Engineering controls: Ensure work areas have ventilation and procedures sufficient to maintain airborne levels below the TLV. Provide safety showers and eyewash station near workplace.

Personal protection: Use good industrial hygiene. Wear face shield or goggles, elbow length gloves, overalls buttoned to the neck and wrist, washable hat and half face respirator with dust and vapor cartridge. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

SECTION 9 Physical & Chemical properties

Appearance: Light yellow liquid

Odor: Characteristic odor

Density: 0.870±0.025

Vapor pressure: NA

Solubility in water: NA

Solubility in organic solvents: NA

Stability in water: Stable in water at pH5-9

Inflammability: Combustible liquid

Explosiveness: Non-explosive

Corrosiveness: Non-corrosive

Containers reactivity: No reaction with containers

pH: 4-7

Water dissociation constant: NA

Viscosity: About 26 centipoise at 20°C



SECTION 10 Stability & Reactivity

Stability: Stable in pH 5-9, avoid contacting caustic solution.

Hazardous Polymerization: No

Hazardous Decomposition Products: Toxic gases, CO, CO₂, toxic dust and smoke.

SECTION 11 Toxicological Information

- Acute Oral: LD50(rat)=300mg/kg
- Acute Dermal: LD50(rat)>2000mg/kg
- Acute Inhalation: LC50(rat)=1.1mg/L air
- Coetaneous and eye irritation: Slightly irritating to skin, moderately irritating to eyes
- Sensitization: Sensitizing

Chronic Toxicity Studies:

In a 1-year study with dogs given oral doses of 0, 0.25, 0.5, or 1 mg/kg/day, there were no changes in tissue at any dose level. However, some dogs at the 0.5 and 1 mg/kg/day levels had pupillary dilation, weight loss, lethargy, tremors and recumbence. The NOEL for this study was 0.25 mg/kg/day. Similar results were seen in a 2-year study with rats fed 0, 0.75, 1.5, or 2 mg/kg/day. No changes in the nervous or muscular systems were observed, but rats in all the dosage levels exhibited body weight gains significantly higher than the controls. A few individuals in the high dose group exhibited tremors.

Reproductive effects: Rats given 0.40 mg/kg/day of abamectin had increased stillbirths, decreased pup viability, decreased lactation, and decreased pup weights. These data suggest that abamectin may have the potential to cause reproductive effects at high enough doses. Teratogenic effects: Abamectin produced cleft palate in the offspring of treated mice and rabbits, but only at doses that were also toxic to the mothers. There were no birth defects in the offspring of rats given up to 1 mg/kg/day. Abamectin is unlikely to cause teratogenic effects except at doses toxic to the mother.

Mutagenic effects:

Abamectin does not appear to be mutagenic. Mutagenicity tests in live rats and mice were negative. Abamectin was shown to be non-mutagenic in the Ames test. Carcinogenic effects: Abamectin is not carcinogenic in rats or mice. The rats were fed dietary doses of up to 2 mg/kg/day for 24 months, and the mice were up to 8 mg/kg/day for 22 months. These represent the maximum tolerated doses.

Organ toxicity:

Animal studies indicate that abamectin may affect the nervous system.

SECTION 12 Ecological Information

- Acute Oral toxicity (LC50) study in birds: LC50=84.6mg/L (Mallard ducks),

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>2000mg/L (Bobwhite quail)

- Acute toxicity (LC50) study in fishes: LC50=42ppb (Carp), 15ppb (Sheepshead minnow), 24ppb(Channel catfish)
- Acute Oral or Contact toxicity (LD50) study in honey bees: LD50 (48hr) = 0.009µg/bee (oral), 0.002µg/bee (contact)

SECTION 13 Disposal Considerations

Waste resulting from uses of product may be dispose of on site at an approved waste disposal facility. Do not contaminate water, food, and feed by dispose. Offer advice for recycling and dispose in a sanitary landfill if allowed.

SECTION 14 Transport Information

DOT/IATA/IMO

Proper shipping name: Pesticide, liquid, toxic (contain abamectin)

Pack Group: N/A

Hazard Class: N/A

SECTION 15 Regulatory Information

R-phrase:

R-22: Harmful if swallowed.

R-50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase:

S-2: Keep out of the reach of children.

S-24/25: Avoid contact with skin and eyes.

S-60: This material and its container must be disposed of as hazardous waste.

S-61: Avoid release to the environment. Refer to special instructions/safety data sheets.

SECTION 16 Other Information

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