



## MATERIAL SAFETY DATA SHEET

### SECTION 1: PRODUCT IDENTIFICATION

**Product Name:** Abamectin 96.5% TC

**Common Name:** Abamectin

**IUPAC name:** (10*E*,14*E*,16*E*,22*Z*)-(1*R*,4*S*,5'*S*,6*S*,6'*R*,8*R*,12*S*,13*S*,20*R*,21*R*,24*S*)-6'-[(*S*)-*sec*-butyl]-21,24-dihydroxy-5',11,13,22-tetramethyl-2-oxo-3,7,19-trioxatetracyclo[15.6.1.1<sup>4,8</sup>.0<sup>20,24</sup>]pentacosa-10,14,16,22-tetraene-6-spiro-2'-(5',6'-dihydro-2'*H*-pyran)-12-yl 2,6-dideoxy-4-*O*-(2,6-dideoxy-3-*O*-methyl- $\alpha$ -L-*arabino*-hexopyranosyl)-3-*O*-methyl- $\alpha$ -L-*arabino*-hexopyranoside mixture with (10*E*,14*E*,16*E*,22*Z*)-(1*R*,4*S*,5'*S*,6*S*,6'*R*,8*R*,12*S*,13*S*,20*R*,21*R*,24*S*)-21,24-dihydroxy-6'-isopropyl-5',11,13,22-tetramethyl-2-oxo-3,7,19-trioxatetracyclo[15.6.1.1<sup>4,8</sup>.0<sup>20,24</sup>]pentacosa-10,14,16,22-tetraene-6-spiro-2'-(5',6'-dihydro-2'*H*-pyran)-12-yl 2,6-dideoxy-4-*O*-(2,6-dideoxy-3-*O*-methyl- $\alpha$ -L-*arabino*-hexopyranosyl)-3-*O*-methyl- $\alpha$ -L-*arabino*-hexopyranoside (4:1)

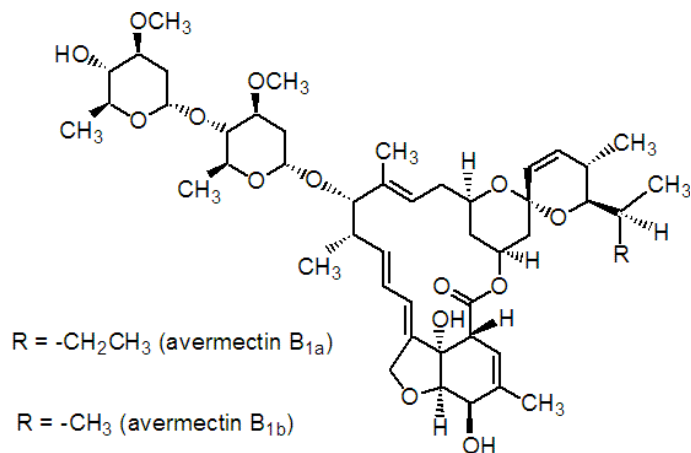
**Chemical Name:** 5-*O*-demethylavermectin A<sub>1a</sub> mixture with 5-*O*-demethyl-25-de(1-methylpropyl)-25-(1-methylethyl) avermectin A<sub>1a</sub>

**Chemical Formula:** C<sub>48</sub>H<sub>72</sub>O<sub>14</sub> (B<sub>1a</sub>); C<sub>47</sub>H<sub>70</sub>O<sub>14</sub> (B<sub>1b</sub>)

**Molecular Weight:** 873.1 (B<sub>1a</sub>); 859.1 (B<sub>1b</sub>)



**Structure Formula:**



**CAS No.:** 71751-41-2 (abamectin); 65195-55-3 (B<sub>1a</sub>); 65195-56-4 (B<sub>1b</sub>)

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Abamectin	92.0% min
Others	8.0% max

**SECTION 3: HAZARDS IDENTIFICATIONS**

**Emergency Overview:** Very toxic if swallowed. Harmful if inhaled.

**SECTION 4: FIRST AID MEASURES**

**If Swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.



**If in Eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Seek medical attention if irritation persists.

**If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**If Inhaled:** Move person to fresh air. If effects occur, seek medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

**Extinguishing Media:** Foam, CO<sub>2</sub>, dry chemical.

**Unusual Fire and Explosion Hazards:** During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion

**In Case of Fire:** Wear full protective clothing and self-contained breathing apparatus. 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.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Clean up small spills immediately, use proper personal protection. Absorb spill with absorbent material such as pet litter. After removal, flush contaminated area thoroughly with water containing a strong detergent. Sweep up and place in a chemical container. Seal the container and handle in an approved manner. Keep spills out of streams and domestic water supplies. Dike to prevent contamination of local water sources. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. Dispose of all waste and rinsate in the appropriate manner.



## SECTION 7: HANDLING AND STORAGE

**Handling:** Keep container closed when not in use. Handle and open container in a manner as to prevent spillage. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Do not reuse empty container.

**Storage:** Store in a tightly closed container in a cool, dry place. Do not contaminate water, food or feed by storage or disposal. Store this product away from heat, sparks and other sources of ignitions.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Personal Protective Equipment

**Eyes:** Protective eyewear (e.g., goggles or full-face shield).

**Skin:** Coveralls over long- or short-sleeved shirt and long or short pants, chemical-resistant footwear plus socks and head covering (for overhead exposure). Chemical-resistant apron when cleaning equipment, mixing or loading.

**Hand:** Chemical-resistant gloves.

**Respirators:** In areas with inadequate ventilation a approved chemical cartridge respirator with organic vapor cartridges and pesticide pre-cartridges or a self-contained breathing apparatus may be required when working with this product.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White powder

**Odor:** Characteristic odor.



**pH:** 4.5-7.0

## SECTION 10: STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Heat and fire.

**Incompatible Materials:** Strong oxidizing agents, alkalis and acids.

**Hazardous Polymerization:** Will not occur.

## SECTION 11: TOXICOLOGICAL INFORMATION

**Acute Oral LD<sub>50</sub> for Rats:** 5-50 mg/kg.

**Acute Dermal LD<sub>50</sub> for Rats:** > 2000 mg/kg.

**Acute Inhalation LC<sub>50</sub> for Rats:** 53-558 mg/m<sup>3</sup> (4 h).

**Acute Eye Irritation for Rabbits:** Non-irritation.

**Acute Skin Irritation for Rabbits:** Non-irritation.

**Skin Sensitization for Guinea Pigs:** Non-sensitization.

## SECTION 12: ECOLOGICAL INFORMATION

**Birds:** Acute oral LD<sub>50</sub> for *Anas platyrhynchos* 85 mg/kg, *Colinus virginianus* > 2000 mg/kg.

**Fish:** LC<sub>50</sub> (96 h) for *Oncorhynchus mykiss* 3.6 µg/L, *Lepomis macrochirus* 9.6 µg/L.



**Daphnia:** EC<sub>50</sub> (48 h) for *Daphnia magna* 0.34 µg/L.

**Algae:** LC<sub>50</sub> (9 d) for *Selenastrum capricornutum* >100 mg/l.

**Bees:** Oral LD<sub>50</sub> 0.0094 µg/bee; Contact LD<sub>50</sub> 0.0022 µg/bee.

**Worms:** LC<sub>50</sub> (28 d) for *Eisenia foetida* 28 mg/kg.

### SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in compliance with local regulations.

### SECTION 14: TRANSPORT INFORMATION

Not available

### SECTION 15: REGULATORY INFORMATION

**Risk Phrases:**

R22 Harmful if swallowed.

**Safety Phrases:**

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### SECTION 16: OTHER INFORMATION

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of the how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made the user should contact the company.