

## MATERIAL SAFETY DATA SHEET

### ACOSTER 5EC

#### IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY:

Product Name: Abamectin-aminomethyl 5% EC

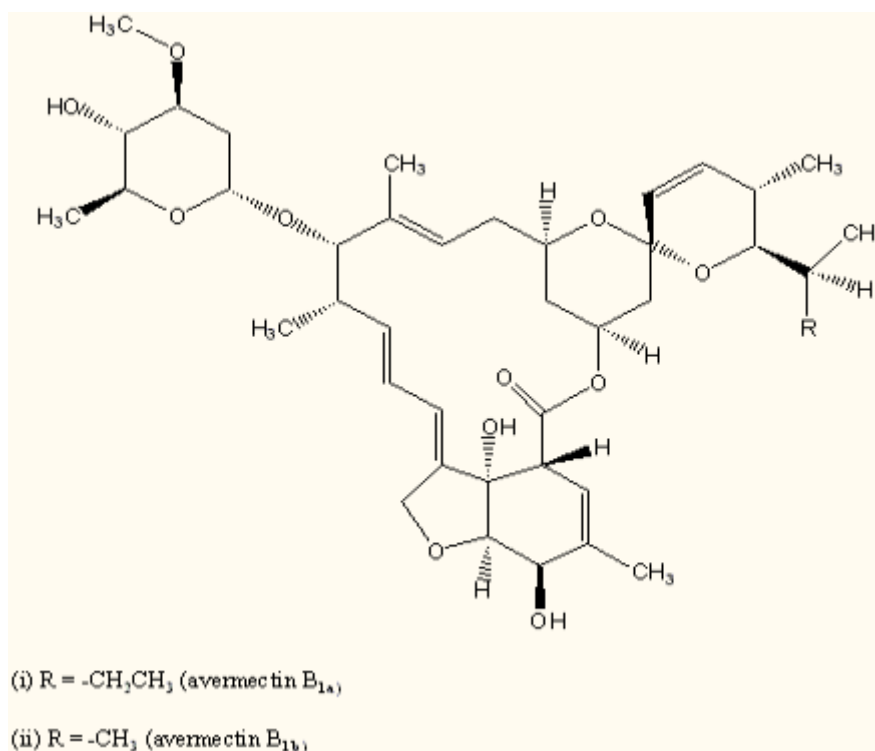
Company Name: Wemax Agro Ltd

Product Type: Insecticide

Product Use: Insecticide, acaricide and nematicide with contact and stomach action.

### 1. Chemical Product Identification

Molecular Formula:



Molecular Weight : 873.11

Chemical Name:

mixture of

(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[15.6.1.14,8.020,24]pentacos-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

and

(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*)-21,22-dihydroxy-6'-isopropyl-5',11,13,22-tetramethyl-2-oxo-(3,7,19-trioxatetracyclo[15.6.1.14,8.020,24]pentacos-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.

## 2. Composition / Information On Ingredients

Type of Formulation: Emulsifiable Concentrate(EC)

Composition	CAS No.	Content%
Abamectin-aminomethyl	71751-41-2	5.0
Inert ingredients		95.0

## 3. Hazards Identification

More important danger for the man: none

Dangers for the environment: high toxic to fish and bees

Physical-chemical dangers: none

#### **4. First Aid Measures**

Skin: wash thoroughly with soap and water.

Eyes: flush with plenty of water for at least 15 minutes.

Inhalation: move to fresh air.

Ingestion: Drink one or two glasses of water and induce vomiting by touching the back of the throat with finger. Repeat until vomit fluid is clear.

#### **5. Fire-Fighting Measures**

Extinguishing media

To be used: Water, sand, foam, carbon dioxide, dry powder

Don't use: not applicable

Particular risk: not applicable

Measures of personal protection: safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

#### **6. Accidental Release Measures**

Personal cautions: Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Cleaning methods

EX: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust.

Ventilate area and wash spill site after material pickup is complete.

Environmental cautions

EX: prevent the contamination of the floor and of beds of water.

## **7. Handling And Storage**

Handling: do not apply to humans, their clothing, or bedding. Do not contaminate food or use on household tanks.

Storage: Store in a cool, dry place.

## **8. Exposure Controls / Personal Protection**

Personal protective equipment

Respiratory protection: approved respirator

Protective gloves: rubber gloves

Eye protection: goggles

Industrial hygiene: not applicable

## **9. Physical And Chemical Properties**

Physical State: Liquid

Appearance: light yellow

Odour: characteristic odour

Specific Gravity: 0.919(20°C)

Boiling Point; 76.5°C

Relative density 0.950-0.965 (20 °C)

Solubility in Water: Form an emulsion in the water

## **10. Stability And Reactivity**

Conditions to avoid: fire, feed, food and beds of water

Products to avoid: strong oxidizing agents, alkalis and acids.

Thermal decomposition: not applicable

Hazardous decomposition products: not applicable

Hazardous reaction: none

## **11. Toxicological Information**

### Acute toxicity:

Abamectin-aminomethyl is highly toxic to insects and may be highly toxic to mammals as well. Symptoms of poisoning observed in laboratory animals include pupil dilation, vomiting, convulsions and/or tremors, and coma. Abamectin-aminomethyl acts on insects by interfering with the nervous system. At very high doses, it can affect mammals, causing

symptoms of nervous system depression such as incoordination, tremors, lethargy, excitation, and pupil dilation. Very high doses have caused death from respiratory failure. Abamectin-aminomethyl is not readily absorbed through skin. Tests with monkeys show that less than 1% of dermally applied Abamectin-aminomethyl was absorbed into the bloodstream through the skin. Abamectin-aminomethyl does not cause allergic skin reactions. The oral LD<sub>50</sub> for Abamectin-aminomethyl TC in rats is 16.1 mg/kg, and in mice ranges from 14 mg/kg to greater than 80 mg/kg. The dermal LD<sub>50</sub> for technical Abamectin-aminomethyl in rats is 1113 mg/kg.

### Reproductive effects:

Rats given 0.40 mg/kg/day of Abamectin-aminomethyl had increased stillbirths, decreased pup viability, decreased lactation, and decreased pup weights. These data

suggest that Abamectin-aminomethyl may have the potential to cause reproductive effects at high enough doses.

Teratogenic effects:

Abamectin-aminomethyl 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 1.6 mg/kg/day. Abamectin-aminomethyl is unlikely to cause teratogenic effects except at doses toxic to the mother.

Mutagenic effects:

Abamectin-aminomethyl does not appear to be mutagenic. Mutagenicity tests in live rats and mice were negative. Abamectin-aminomethyl was shown to be non-mutagenic in the Ames test.

Carcinogenic effects:

Abamectin-aminomethyl is not carcinogenic in rats or mice. The rats were fed dietary doses of up to 2.5 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-aminomethyl may affect the nervous system.

Other data: not applicable.

## **12. Ecological And Ecotoxicological Information**

### Fate in humans and animals:

Tests with laboratory animals show that ingested Avermectin B1a is not readily absorbed into the bloodstream by mammals and that it is rapidly eliminated from the body within 2 days via the feces. Rats given single oral doses of Avermectin B1a excreted 69 to 82% of the dose unchanged in the feces. The average half-life of Avermectin B1a in rat tissue is 1.2 days.

Lactating goats given daily oral doses for 10 days excreted 89% of the administered avermectin, mainly in the feces. Less than 1% was recovered in the urine.

### Effects on birds:

Abamectin-aminomethyl is practically nontoxic to birds. The LD<sub>50</sub> for Abamectin-aminomethyl in bobwhite quail is >2000 mg/kg. The dietary LC<sub>50</sub> is 3102 ppm in bobwhite quail. There were no adverse effects on reproduction when mallard ducks were fed dietary doses of 3, 6, or 12 ppm for 18 weeks.

### Effects on aquatic organisms:

Abamectin-aminomethyl is highly toxic to fish and extremely toxic to aquatic invertebrates. Its LC<sub>50</sub> (96-hour) is 0.0032 mg/L in rainbow trout, 0.0096 mg/L in bluegill sunfish, 0.015 mg/L in sheepshead minnows, 0.024 mg/L in channel catfish, and 0.042 mg/L in carp. Its 48-hour LC<sub>50</sub> in *Daphnia magna*, a small freshwater crustacean, is 0.00033 mg/L. The 96-hour LC<sub>50</sub> for Abamectin-aminomethyl is 0.0016 mg/L in pink shrimp, 430 mg/L in eastern oysters, and 153 mg/L in blue crab. While highly toxic to aquatic organisms, actual concentrations of Abamectin-aminomethyl in surface waters adjacent to treated areas are expected to be low. Abamectin-aminomethyl

did not bioaccumulate in bluegill sunfish exposed to 0.099 ug/L for 28 days in a flow-through tank. The levels in fish were from 52 to 69 times the ambient water concentration, indicating that Abamectin-aminomethyl does not accumulate or persist in fish.

Effects on other organisms:

Abamectin-aminomethyl is highly toxic to bees, with a 24-hour contact LC<sub>50</sub> of 0.002 ug/bee and an oral LD<sub>50</sub> of 0.009 ug/bee.

**13. Disposal Considerations**

Product: dispose of in compliance with all state and local laws and regulation.

**14. Transport Information**

Not applicable

**15. Regulatory Information**

Symbol: not applicable

R phrases: not applicable

S phrases: not applicable

**16. Other Information**

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new

danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.