

Abamectin 18 g/L EC

MATERIAL SAFETY DATA SHEET

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1. PRODUCT IDENTIFICATION

Product Name: Abamectin 18 g/L EC

Chemical Name (IUPAC):

(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^{4,8}.0^{20,24}]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-*-L-arabino*-hexopyranosyl)-3-*O*-methyl-*-L-arabino*-hexopyranoside (i) 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^{4,8}.0^{20,24}]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-*-L-arabino*-hexopyranosyl)-3-*O*-methyl-*-L-arabino*-hexopyranoside (ii) (4:1)

CAS No.: 71751-41-2

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No	Conc.
Abamectin	71751-41-2	18 g/L
N-Methyl-2-pyrrolidone	872-50-4	300 g/L
Other non hazardous ingredients	secret	up to 100%

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

3. HAZARDS IDENTIFICATION

Symptoms of Acute Exposure

May cause eye, skin and respiratory tract irritation.

May cause contact dermatitis.

Allergic skin reactions are possible.

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Light gray liquid

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Odor: Slight

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition.

4. FIRST AID MEASURES

Ingestion

If swallowed, call a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.

Eye Contact

If in eyes, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact

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.

Inhalation

If inhaled, move person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth to mouth if possible. Call a poison control center or doctor for treatment advice.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and /or systemic steroids.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash point: Not applicable

Flammable Limits: Not applicable

Autoignition Temperature: Not applicable

Flammability: Not Flammable

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use dry chemical, foam or CO₂ extinguishing media. Wear full protective clothing and self-contained breath in 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.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contamination soil or from entering sewage and drainage systems or any body of water. Clean up Spills immediately. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent. 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

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingestion

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact

Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact

Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation

A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light gray liquid
Odor:	Slight
Melting point:	Not applicable
Boiling point:	> 100°C
Density:	1.34g/cm ³
pH:	6.5-8.5
<u>Solubility in H₂O:</u>	Chlorothalonil 0.81 mg/L at 25°C
<u>Vapor pressure:</u>	5.7 X 10 ⁽⁻⁷⁾ mm Hg at 25°C

10. STABILITY AND REACTIVITY

Stability:	Stable under normal use and storage conditions.
Hazardous Polymerization:	Material is not known to polymerize.
Conditions to Avoid:	None known.
Materials to Avoid:	None Know.
Hazardous Decomposition Products:	Can decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Ingestion	Oral (LD50 Rat)	9000 mg/kg body weight
Dermal	Dermal(LD50 Rabbit)	> 2000 mg/kg body weight
Inhalation	Inhalation (LC50 Rat)	> 0.0704 mg/L air----4 hours
Eye Contact	Moderately Irritating (Rabbit)	
Skin Contact	Mildly irritating (Rabbit)	
Skin Sensitization	A skin sensitizer.	

Reproductive/Developmental Effects

Chlorothalonil: No evidence of adverse developmental effects in rabbit and rat studies.

Chronic/Subchronic Toxicity Studies

Chlorothalonil: In dogs, 1 years administration caused a significant decrease in body weight gain and increases in absolute liver and kidney weights.

Neurotoxicity: No evidence in regulatory studies.

Carcinogenicity

Chlorothalonil: No evidence of carcinogenicity in dogs after administration for up to one year. Treatment related increases in the incidence of renal tubular adenoma and carcinoma were observed in rats and male mice. Squamous cell adenomas and carcinomas were also observed in the forstomach of both species. The forstomach tumors seen in rodent studies are not relevant to human health, as humans do not possess an anatomical equivalent of the rodent forstomach. The relevance of renal tumors to human health is unclear, although metabolism data suggest that the dog, a species that is resistant to chlorothalonil-induced renal injury, may be more representative of humans than the rat. IARC identifies chlorothalonil as a 2B carcinogen.

Other Toxicity Information

Studies on rats and mice have suggested that technical chlorothalonil, when fed at high levels in the diet, may have oncogenic potential to these laboratory animals. However, neither chlorothalonil nor its metabolites interact with DNA and thus are not mutagenic. Tumor formation has been related to a non-genotoxic mechanism of action for which threshold levels have been established in rats and mice. Comprehensive dietary and worker exposure studies have shown exposure levels for humans to be well below these threshold levels. In addition, surveillance of chlorothalonil plant workers for over twenty years has not demonstrated any increase in oncogenic potential to humans.

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Additional Toxicity Information:

May cause irritation of the gastrointestinal tract following ingestion of large amounts.

Mildly irritating to skin. Material rarely causes an allergic reaction.

May be irritating to the respiratory tract. This is rarely observed.

Material is not readily absorbed through intact skin.

12. ECOLOGICAL INFORMATION

Summary of Effects

Chlorothalonil: Toxic to fish.

Eco-Acute Toxicity

Chlorothalonil: Bees LC50/EC50 >181 ug/bee

Invertebrates (Water Flea) LC50/EC50 0.068ppm

Fish (Trout) LC50/EC50 0.04ppm

Fish (Bluegill) LC50/EC50 0.06ppm

Birds (8-day dietary-Bobwhite Quail) LC50/EC50 >5200 ppm

Birds (8-day dietary-Mallard Duck) LC50/EC50 >5200 ppm

Environmental Fate

Chlorothalonil: The information presented here is for the active ingredient, chlorothalonil.

Low bioaccumulation potential. Not persistent in soil or water. Low mobility in soil.

Sinks in water (after 24h).

13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

Hazard class or division: Class 9

Identification numbers: N/A

Packing Group: N/A

15. REGULATORY INFORMATION

N/A

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16. OTHER INFORMATION

N/A