

MARGOSOM® 1% EC
Azadirachtin 1% EC
BioInsecticide
(Regd in Central Insecticides Board, Govt of India)

Introducing MARGOSOM® 1 % EC

MARGOSOM® 1% EC is a BioInsecticide, based on botanical extract of *Azadirachta indica* (Lam.) MARGOSOM® 1% EC has Azadirachtin and other neem bitters as active ingredients and is formulated as 1% Emulsifiable Concentrate (300 ppm).

MARGOSOM® 1% EC is registered by Indian Pesticides Regulatory Authority - Central Insecticides Board, Govt of India.

Azadirachtin is a highly oxidised tetranortriterpenoid with an oxygen functionality, comprises of an enol ether, acetal, hemiacetal, and tetra-substituted oxirane as well as a variety of carboxylic esters.

A Historical Brief

Neem seed kernel decoction and neem leaf powder decoction have been used by farmers in India for centuries for protecting crops against pests.

Azadirachtin was first extracted from the Indian neem tree in 1968, but its structure was not correctly determined until 1985.

In India, Bambarkar in 1990 presented a table showing the activity of neem against twenty species of insect pests, ten nematodes and several fungi.

Mode of Action

MARGOSOM® 1% EC disrupts the growth cycles of insects and deters them from feeding on plants.

The mode of action of azadirachtin may be due to interference with the neuroendocrine system controlling ecdysone and juvenile hormone synthesis. It also inhibits the release of ecdysone from the hormone-producing gland of insects resulting in moulting inhibition thereby antifeedant action is seen. In addition, azadirachtin causes inhibition of chitin synthesis.

Method of Application

Foliar application: Mix MARGOSOM® 1 % EC @ 1 – 2 ml/ L of water and spray on crop canopy.

The spray volume depends upon the crop canopy. It is recommended that BioPesticides are sprayed in early hours of morning or late afternoon for better results. UV radiation in peak sunny hours of the day may reduce the bio efficacy of BioPesticides.

Target Pests

MARGOSOM[®] 1 % EC effectively controls fruit borer of tomato and fruit and shoot borer of brinjal

It also effectively controls sucking insects like Thrips, Jassids, Aphids and Whiteflies, Flea beetles and other chewing insects like *Helicoverpa arimigera*, *Helicoverpa zea*, *Spodoptera litura*, *Spodoptera exigua*, *Earias spp.*, *Achae janta*, Bunch caterpillars, Leaf Folders, Army worm, Cut Worm

Crops

MARGOSOM[®] 1% EC is suitable for application on Cereals , Millets , Pulses, Oilseeds, Fibre Crops , Sugar Crops , Forage Crops , Plantation crops ,Vegetables, Fruits, Spices , Flowers , Medicinal crops , Aromatic Crops , Orchards and Ornamentals.

Compatibility

MARGOSOM[®] 1% EC is compatible with BioPesticides and with conventional chemical pesticides.

Shelf Life

MARGOSOM[®] 1% EC is stable for a period of 24 months from the date of manufacturing.

Mass Composition

CONSTITUENT	WW %	FUNCTION
Azadirachtin	01.00%	Active
Neem oil	30.00%	Active
Solvent – n Butanol	31.00%	Inactive
Solvent – Butyl acetate	23.00%	Inactive
Emulsifier – Poly oxy ethylene(20) sorbitan monoleate	15.00%	Inactive

BIOLOGICAL COMPOSITION

CONSTITUENT	POTENCY
Azadirachtin	10000 ppm

Free from Salmonella, Shigella , E.Coli

Cautions for handling and use of product

1. Direct incidence of MARGOSOM[®] 1 % EC on eyes may be dangerous. It is strongly recommended that the operator wears eye goggles, face mask and protective clothing while handling the product.
2. Do not spray against the wind. The product must be diluted in sufficient water once the sealed container is opened.
3. Avoid inhalation and skin contact while diluting as there could be spillage / splashes of the product
4. Mixing and spraying equipment is to be thoroughly rinsed with water and detergent before using the same equipment for spraying other pesticides.
5. Surplus spray solution should NOT be disposed in crop lands / stagnant water / flowing water where there is a possibility of causing pollution to natural resources.
6. Do not eat / drink / smoke during application.

Symptoms and Antidotes

Symptoms: Occasional symptoms include head ache and nausea.

Antidote: In the case of ingestion: symptomatic treatment is advised. In the case of contact with Eyes: Flush with water liberally for 20 minutes. In case of skin contact, wash the affected area with plenty of water and soap.

Citations

There are many citations in public domain on effectiveness of *Azadirachtin* as a BioInsecticide.

Commitment to Nature

- MARGOSOM[®] can be used along with conventional chemical pesticides thus optimizing pesticide usage.
- MARGOSOM[®] 1% EC is safe to natural parasites, pollinators and predators.
- MARGOSOM[™]1% EC can be used as an effective component in IPM programmes, thereby leading to a reduction in use of chemical pesticides and creating a safer environment.
- MARGOSOM[®] 1% EC does not lead to residue problems and doesn't cause resistance or resurgence problems.

Benefits from MARGOSOM[®] 1% EC

- MARGOSOM[®] 1% EC effectively controls most of the economically important pests such as fruit borer of tomato and fruit and shoot borer of brinjal, Thrips, Jassids, Aphids and Whiteflies, Flea beetles and other chewing insects like *Helicoverpa arimigera*, *Helicoverpa zea*, *Spodoptera litura*, *Spodoptera exigua*, *Earias spp.*, *Achae janta*, Bunch caterpillars, Leaf Folders, Army worm, Cut Worm

- Pest reduction leads to improved plant health and thereby increased crop productivity.
- MARGOSOM[®] 1% EC is pet friendly , eco friendly and infant friendly

