

BIOPREN® 50 LML LIQUID MOSQUITO LARVICIDE



**based on
S-methoprene
insect growth
regulator**



BIOPREN® 50 LML

LIQUID MOSQUITO LARVICIDE

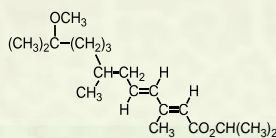


BIOPREN® 50 LML has been developed for professional mosquito control operators. In order to achieve both immediate and residual effect, the formulation contains free and microencapsulated S-methoprene. The formulation is recommended for control of *Aedes* and *Culex* spp.

ADVANTAGES:

- Immediate and prolonged efficacy.
- Not toxic to vertebrates and environment friendly.
- Acts during 3rd and 4th larval instars of the mosquitoes' development.
- Can be applied environmentally sensitive aquatic habitats and potable water.
- IGR in two forms controls the release of the active ingredient and improves photo-stability, which increases the residual effectiveness of the product.
- Suitable for both aerial and ground applications.
- Controls residual mosquito larvae for 7-14 days.

ACTIVE INGREDIENT:



w/w 5.00 % (51.50 g/l) S-methoprene

Acts as an insect juvenile hormone analogue that inhibits insect maturation processes. The mature stages lose their capacity to reproduce, thus the cycle of reproduction stops and infestations diminish.

PHYSICAL PROPERTIES:

APPEARANCE: light yellowish liquid
ODOUR: none
SOLUBILITY: dispersible in water
RELATIVE DENSITY: 1.03 g/cm³





STABILITY:

Store in the closed, original container in a dry, cool, well ventilated area out of direct sunlight. Store above 5°C. Do not freeze.. it can be used for 2 years from manufacture. Keep out of reach of children or domestic animals.

**PRODUCT FOR
PROFESSIONAL AND
AMATEUR USE**

**EXPIRATION PERIOD:
2 years**

PACKING:

KS-22236	 12 x 1 L	 32 cartons
KS-22235	 2 x 5 L	 33 cartons



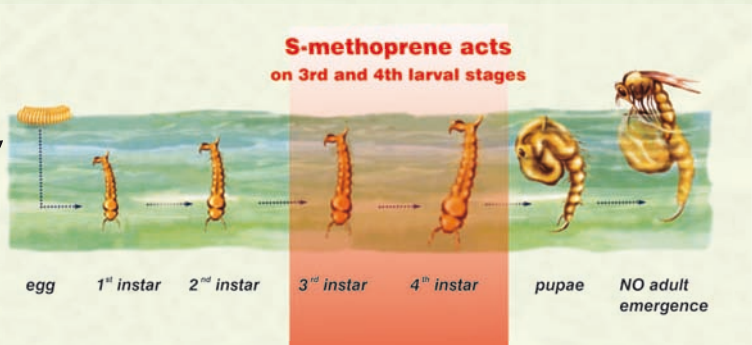
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S-methoprene based mosquito larvicides disrupt the development of mosquito larvae in ponds, puddles, swamps, and other natural or artificial bodies of water. The environment-friendly biorational active ingredient S-methoprene break the mosquito's life cycle preventing the emergence of biting and breeding adults. S-methoprene is active against a range of species including Anopheles, Culex, Culiseta, Coquilletidia spp. as well as those of the floodwater complex, Aedes and Psorophora spp. Larvae treated with S-methoprene can continue to develop into the pupal stage but die prior to emergence.

S-methoprene based mosquito larvicides are enviro-friendly formulations. S-methoprene does not pose unreasonable risks to wildlife or the environment. Its toxicity to fish and birds is low, and it is non toxic to bees. The acute oral toxicity of S-methoprene and other toxicological parameters are also very favourable, with extremely low mammalian toxicity demonstrated by the fact that the World Health Organization (WHO) allows the use of S-methoprene based products for control of mosquito larvae in potable water storages.

S-methoprene has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment, typically acts during 3rd and 4th larval instars of the mosquitoes' development. Since this active substance interferes with the development of the larvae, they will stay alive and develop into pupae. Treated larvae continue to develop normally to the pupal stage after which they fail to emerge and drown. Their death will mostly occur while hatching from the pupae (hatching inhibition).



BIOPREN 50® LML has sufficient activity to be effective against existing broods when applied to any larval stage at recommended rates.

Biopren 50 LML dosage (mL/hectare)		
Breeding site type	Breeding site / water depth	
	<30 cm	>30 cm
Clean	220	290
Slightly contaminated (marshy, swampy area, riceland)	290	360
Highly contaminated (sewer treatment plant, infiltration pool)	360	400

The given dosage should be diluted with water as the working solution volume is recommended to be 5-50 L/hectare.

Pour 2-3 Liters water into the container of spraying equipment, add the suitable dosage of Biopren 50 LML concentrate and then fill up to the final volume.



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Possible breeding sites:

swamps and marshes, stagnant water, ditches, drains, flooded remnants, woodland pools, and possible breeding sites for mosquitoes. Apply in all the artificial water cumulation such as puddles, pools, artificial basins and in all the close hydraulic systems etc.

Detailed description of Application:

SHAKE WELL BEFORE USING. BIOPREN® 50 LML (Liquid Mosquito Larvicide) may separate on standing and must be thoroughly agitated prior to dilution. Where possible use the mixture on the day of mixing.

1. Ground: Determine the average total spray volume applied per hectare by individual operators and/or specific equipment. Mix BIOPREN 50 LML (Liquid Mosquito Larvicide) in sufficient water to deliver the rate per hectare of BIOPREN 50 LML recommended on this label (220-360 mL/ha).

Aerial treatment – keep to local regulations!

2. Aerial: Low Volume (5-50 L/ha)

Boom and nozzle - Use the recommended amount of BIOPREN 50 LML (Liquid Mosquito Larvicide) in sufficient water to give good coverage. 5-50 L/ha of total spray volume is usually satisfactory. DO NOT apply when weather conditions favour drift from areas treated. A large droplet size (> 150 microns) is recommended to minimise drift and ensure good canopy penetration.

3. Aerial: Ultra-low Volume (< 5 L/ha)

Rotary atomiser - Use the recommended amount of BIOPREN 50 LML (Liquid Mosquito Larvicide) in sufficient water to give good atomisation and coverage. Dilution of 1 part BIOPREN 50 LML to 2 parts water is the recommended minimum. This results in a total application volume of 660 mL (at the 220 mL/ha BIOPREN 50 LML rate) to 1080 mL (at the 360 mL/ha rate). The quantity of water may be increased to give a total spray volume of up to 5 L to give better coverage. A large droplet size (>150 microns) is recommended to minimise drift and ensure good canopy penetration. For aerial application, BIOPREN 50 LML (Liquid Mosquito Larvicide) is NOT recommended where the water surface is obscured by vegetation.

Mixing:

DO NOT mix with oil. Always use clean equipment. Partially fill spray tank with water, then add the recommended amount of BIOPREN 50 LML (Liquid Mosquito Larvicide), agitate and complete filling. Mild agitation during application is desirable.

In general the residuality of the product is 7 -14 days pending on conditions.

Use insecticides safely. Always read the label and product information before use.

