



## TECHNICAL DATA BULLETIN

### PRODUCT TECHNICAL INFORMATION AND APPLICATIONS

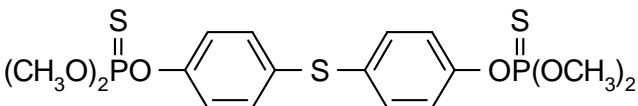
# **LARVATE<sup>®</sup> 500EC**

*Temephos 500 g/L "EC"*

#### 1 INTRODUCTION

**LARVATE 500EC** is an emulsifiable concentrate formulation of Temephos. It contains 500 g/L of Temephos dissolved in the appropriate solvent, with other necessary formulates for the use of mosquitoes larvae control in swamps and water ponds.

#### 2 ACTIVE INGREDIENT IDENTITY:

<b>Common Name</b>	<b>Temephos</b>
Chemical Group	Organophosphorus
CAS Registry No.	3383-96-8
Molecular Formula	$C_{16}H_{20}O_6 P_2 S_3$
Chemical Name (IUPAC)	O,O,O',O'-tetramethyl O,O'-thiodi- <i>p</i> -phenylene bis(phosphorothioate); O,O,O',O'-tetramethyl O,O'-thiodi- <i>p</i> -phenylene diphosphorothioate
Structural Formula	
Molecular weight	466.5
$K_{ow}$ log P	4.91
Acute oral LD <sub>50</sub> , Male rat	4204 mg/kg



### 3 PHYSIOCHEMICAL PROPERTIES:

**LARVATE 500EC** conforms to the WHO specification WHO/SIF/31.R3 approved 25 September 1989.

Assay "Temephos"	500 ± 25 g/L
Appearance	Clear light yellow liquid free of visible impurities
Odour	Mild Aromatic (faint amine odour)
Density	1.1700 ± 0.006 Kg/L at 25°C
Water contents	1.4 g/Kg
Acidity as H <sub>2</sub> SO <sub>4</sub>	0.098 g/Kg
Flash point	44.3°C

### 4 MODE OF ACTION:

**LARVATE 500EC** is a non-systemic organophosphorus insecticide. It is used as a selective insecticide with a long residual activity. It is a cholinesterase inhibitor.

### 5 USES:

**LARVATE 500EC** is used for the control of Larvae of mosquito (*Anopheles* spp., *Aedes* spp., *Culex* spp.) midges, sand flies and *Simulium* spp. in ponds, lakes, marches and swamps. It is also used for the control of fleas on dogs and cats.

**LARVATE 500EC** is effective on Larvae, rather than the adults. It is widely used in mosquito abatement programs. It is acceptable for use in potable water.

### 6 APPLICATIONS:

**LARVATE 500EC** is applied to the surface of ponds, marshes, swamps and tidal areas. It is also applied to the ground around the edges of such areas. It may be applied by ground or aerial spraying equipment.

**LARVATE 500EC** is applied at the rate of 0.2 – 1.0 L/ha. It may be used in public health programmes at the LEVEL of 2 ppm. Control *Aedes aegypti* larvae in drinking water.



**NOTE:** Apply every two days in heavy infestation for two weeks to control insect reproduction, then spraying on weekly basis.

**7 COMPATIBILITY:**

**LARVATE** 500EC can be mixed with other compounds for broader spectrum insect control, such as Trichlorfon. However, it is incompatible with alkaline substances.

**8 TOXICITY CLASSIFICATION:**

According to WHO Temephos technical has been classified as materials, which is unlikely to present acute hazard in normal use.

**9 TOXICITY INFORMATION**

**Active ingredient:**

- Acute Mammalian Toxicity:
  - LD<sub>50</sub>, Oral Rat = 4,205 mg/Kg for male and > 10,000 mg/Kg for female
  - LD<sub>50</sub>, precutaneous, Rate > 4,000 mg/Kg
- Birds:
  - LC<sub>50</sub>, five days dietary, for mallard duck = 1,200 mg/Kg diet
- Fish:
  - LC<sub>50</sub>, for rainbow trout = 31.8 mg/L
- Bees:
  - LC<sub>50</sub>, topical = 1.55 µg/bee.

It should be noted that Temephos may injure or kill young shrimp or crabs in treated tidal areas.

**Formulation:**

- Acute oral LD50 Rat male = >10000 mg/Kg

**10 HANDLING, STORAGE AND TRANSPORTATION:**

Adequate washing facilities should be provided at all times during handling. Eating, drinking or smoking should be prohibited during handling and before washing after handling.

When opening the container and when mixing, care should be taken to avoid contact with eyes and mouth.



The product should be kept in its original sealed container in a cool dry ventilated store away from children foodstuffs, animal feed and their containers.

The material should be transported in clearly labelled leak-proof containers.

11 OTHER INFORMATION
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Buyer assumes all responsibility for safety and use not in accordance with the product label instructions