

50 EC – TEMEPHOS SPECIFICATION NO.305A

1. **Description of the Chemical Agent.** The product consists of an emulsifiable concentrate of Temephos-50 EC as active ingredient which acts as a larvicide of the mosquitoes. The detail mode of action is as follows.

2. **Temephos (Temefos)** The active ingredient is Temephos 50 EC. Temephos (Temefos) 50 EC is an organo-phosphorous compound recognized as one of the most effective larvicides. It can effectively kill the various species of mosquito larvae namely : culex, aedes and anopheles mosquitoes. It blocks the cholinesterase enzyme activities of the brain & nervous system, which ultimately paralyzes & causes death to the larvae. Because of its high effectiveness & eco-friendliness, Temephos 50 EC is considered very safe to human & other non-targeted aquatic creatures like fishes & others.

About **10-15 ml of Temephos 50 EC** is to be diluted in **10 liters of water** & Sprayed over 500m² (Square metre) of **moderately polluted water** breeding sites, viz: stagnant drains, shallow ponds, marshes & swamps. When **heavily polluted, 15-20 ml of Temephos 50 EC** is to be diluted in **10 litres of water** and sprayed over 500m² of water breeding sites viz: drains, septic tanks etc.

3. **Appearance.** The chemical remains in viscous liquid state when kept in normal room temperature. The colour is usually brown in pure state. It has an identical odour. It is normally free from any visible suspended matter and sediment.

4. **Side Effects.** Excessive application or contact on skin surface of Temephos can cause mild to moderate irritation. It may also cause eye sores & breathing difficulties when inhaled. But Temephos is generally well-tolerated chemical agent with a low toxicity to human. So, the safety profile is higher than other larvicides, However, wearing of PPE (Personal Protective Equipments) can easily prevent the undesirable & unpleasant effects.

5. **Safety Pule:** In a recommended dose it is absolutely safe in using the water. It is approved by WHO & NVBDCP (National Vector Borne Disease Control programme).

6. Specification of Temephos 50 EC

a.	<u>Formulated Products</u>	:	
(1)	Identity/Appearance	:	Liquid
(2)	Odour	:	Organophosphate odour
(3)	Type of Formulation	:	Emulsifiable concentrate
(4)	Content of active ingredients	:	50% Technical Temephos
(5)	Water content/Moisture	:	Maximum 0.2%
(6)	Specific gravity	:	1.083 (±0.02)
(7)	Acidity	:	0.5% Maximum as H ₂ SO ₄
(8)	Alkalinity	:	0.5% Maximum as NaOH

7. **Labelling & Marking of the Packages.** This chemical agent Temepohs, when supplied should be packed in suitable clean plastic containers. Each plastic container should be weighing either 01 or 05 liters of chemical. The following informations should be legibly marked & mentioned on the container's surfaces:

- a. Name of the contents.
- b. Manufacturer's name.
- c. Net Weight of the contents: 01 or 05 litres (**without container**).
- d. Date of production.
- e. Date of expiry.
- f. Dilution instructions.
- g. Detail using instructions.
- h. Probable side effects.
- j. Safety measures & precautions.
- k. DGDP contract no.

8. **General Safety Instructions for Handling.** Generally all the pesticides are toxic in excessive doses. It is poisonous if ingested. Accidental inhalation will produce excessive coughing & shortness of breath. It is also generally act as an irritant to the skin & eyes. The following measures are recommended to avoid undesirable effects:

- a. When handling Temepohs, use clean rubber gloves, protective clothings and goggles. The gloves should be frequently replaced and destroy the used materials in a proper place.
- b. During accidental contact remove all the clothing and wash/rinse the skin with soap and tab water. It is necessary to wash the clothings well before every use.
- c. When accidentally comes in contact with the eyes, immediately flush the eyes with tap water for at least 15 minutes and seek medical attention immediately.
- d. Always wash the hands, face & body with soap and water thoroughly after handling the chemical agent and before taking the food.
- e. The materials should be kept away the food products to avoid accidental ingestion.
- f. Keep the product away from the heat and open flame.
- g. Keep the product always & out of reach of children.
- h. The container should be labelled with a sticker written as 'Poison' by red ink.

9. **Inspection Procudure.** Inspection of supplied products during acceptance should be carried out by an officer from DST. The Inspecting officer would draw the representative sample from each consignment and submit the sample to AFFDL, Dhaka cantonment for detail analysis. After receiving the analytical report, AFFDL would be forwarded a report to DST. After the approval by AFFDL, Dhaka cantonment the decision the of DST regarding the consignment & the delivery would be final.