



MATERIAL SAFETY DATA SHEET

LARVATE[®] 10SG

ASTRA INDUSTRIAL COMPLEX CO., LTD. (ASTRACHEM)
P.O. Box 30447, AL-KHOBAR 31952
KINGDOM OF SAUDI ARABIA

1. PRODUCT IDENTIFICATION

Product Name: LARVATE[®] 10SG

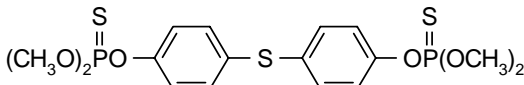
Active ingredient: Temephos

Chemical Class: Organophosphorus

Use: LARVATE[®] 10SG is a granular formulation of Temephos. It contains 10 g/Kg of Temephos in granular form with other necessary formulants. It is used as an insecticide for the control of Larvae of mosquitoes (*Anopheles spp.*, *Aedes spp.*, *Culex spp.*), midges, sand flies, and flies and *Simulium spp.* in ponds, lakes, marches and swamps.

Producer: Astra Industrial Complex Co., Ltd.
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance	Proportions (% w/w)	Chemical structure
Temephos Technical CAS No.3383-96-8 IUPAC Name: 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	1.112 (= 10 g/L)	
Inert Ingredients	98.888	



3. HAZARD IDENTIFICATION

Ingestion:

The concentrate is slightly toxic by ingestion. Acute oral toxicity is very low, LD₅₀> 10,000 mg/Kg (Rat, female)

Eye:

The granules may cause irritation.

Skin:

Prolonged and repeated skin contact may cause irritation.

Inhalation:

Inhalation may cause respiratory irritation and chemical pneumonities.

Chronic Effects

Unknown

4. FIRST AID MEASURES

Swallowing:

If swallowed, vomiting should be induced if the person is conscious. In the event of collapse artificial respiration should be given. Consult a physician immediately.

Skin:

Wash affected area with plenty of soap and water. Remove contaminated clothing. Launder contaminated clothing separately. Get medical attention.

Eyes

If in eyes, hold eyes open, flood with water for at least 15 minutes. Consult a physician.

Inhalation:

Remove victim to fresh air. If not breathing administer artificial respiration. Avoid unprotected mouth-to-mouth resuscitation. GET MEDICAL ATTENTION.



5. FIRE FIGHTING MEASURES

Fire Fighting measures:

Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces. Keep upwind.

Extinguishing Media

Carbon dioxide (CO₂), foam or dry chemical powder. Use water spray to cool exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak:

Contain spill and absorb with sand or other inert absorbent and collect absorbent in a plastic lined metal drum for disposal. Prevent from entering drains, waterways and sewers. Liquid chlorine bleach may be used to decontaminate the spill area.

Waste disposal method:

Dispose of in accordance with local regulations.

Container disposal:

Dispose of in an approved facility according to local regulations.

7. HANDLING AND STORAGE

Not classified as a dangerous good for transport and storage. Store in the closed, original labeled container in a cool, dry well ventilated area out of direct sunlight. Keep in a safe place away from foodstuffs, seeds or fertilizers. Keep out of the reach of children. Wash thoroughly with soap and water after handling the material and before eating or drinking.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards:

No exposure standards have been set for this product.

Engineering Controls:

When used in the field no special engineering controls required.

Personnel Protection:



The product will irritate the eyes and may irritate the skin. Avoid contact with eyes and skin. When preparing product for use wear elbow length PVC gloves and face shield or goggles. After use and before eating drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Temephos contents:	9 – 12
Appearance:	Red free flowing granules
Density	1.3 – 1.6 Kg/L
Odour:	Faint amine odour

10. STABILITY AND REACTIVITY

Reactivity:

Avoid contact of the concentrate with strong alkalis and strong oxidizing agents.

Avoid storage above 60°C

Hazardous Decomposition Product:

- Carbon monoxide.
- Carbon dioxide.
- Oxides of Phosphorus
- Oxides of Sulfur.

11. TOXICOLOGICAL INFORMATION

Larvate 10SG:

LD₅₀, Oral Rat > 10,000 mg/Kg

Active Ingredient (Temephos):

Acute Mammalian Toxicity:

LD ₅₀ , Oral Rat (male)	4,204 mg/Kg
LD ₅₀ , Oral Rat (Female)	> 10,000 mg/Kg
LD ₅₀ , precutaneous, Rat	> 4,000 mg/Kg

Birds:

Dietary LC₅₀, (5 d) for mallard duck 1,200 mg/Kg diet

Fish:



LC₅₀, for rainbow trout 31.8 mg/L
Bees:
LD₅₀ Topical: 1.55 µg/bee.

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

12. ECOLOGICAL INFORMATION

Test with various wildlife species indicate that the compound is highly toxic to some organisms and moderately toxic to other species.

Larvete 10 SG shows a wide range of toxicity to aquatic organisms. The most sensitive species of Fish is the rainbow trout LD₅₀ ranging from 0.16 to 3.49 mg/Kg

It is highly toxic to bees.

13. DISPOSAL CONSIDERATION

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable local procedures.

Emptied container retains vapour and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Do not reuse container. Triple rinse containers, then puncture and dispose of in a sanitary landfill or by incineration, or if allowed by local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

Product not classified as a dangerous good for transport by road, rail, sea or air. It is a good practice to separate this product from food and animal feedstuffs, seeds or fertilizers during transport.

15. REGULATORY INFORMATION.

Public Health Product

16. OTHER INFORMATION

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