



MATERIAL SAFETY DATA SHEET

FENDURE[®] 500ULV

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

1. PRODUCT IDENTIFICATION

Product Name: **FENDURE[®]** 500ULV

Chemical Class: Organophosphorus Pesticide

Use: Fendure 500ULV is an organophosphorus insecticide, which acts by contact activity and a stomach poison. It is used for the control of insect pests in public health programs.

Producer: **Astra Industrial Complex Co., Ltd.**
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Kingdom of Saudi Arabia
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance	Proportions (% w/w)	Chemical structure
Fenitrothion CAS No. 122-14-5 Chemical Name: O,O-dimethyl O-4-nitro- m-tolyl phosphorothioate (IUPAC)	48.08	
Formulation Aids	51.92	



3. HAZARD IDENTIFICATION

Acute Effects

Swallowed:

The concentrate is moderately toxic. Small amounts swallowed incidental to normal handling operations may be harmful. However, swallowing larger quantities may cause serious injury or even death. If the liquid entered the lungs it may cause lungs injury or even death due to pneumonia.

Eyes:

May be mildly irritating to the eyes.

Skin

This product may be absorbed through the skin prolonged exposure may cause skin irritation.

Inhalation:

Inhalation of excessive amount of spray may cause cholinesterase inhibition. Prolonged exposure to solvent may cause respiratory irritation and central nervous system depression.

Cronic effects.

Chronic symptoms in humans include genaral malaise, fatigue, headache, loss of memory and ability to concentrate.

Fenitrothion is not carcinogenic, mutagenic, embryotoxic or teratogenic in long-term studies.

Other Health Hazard Information

Cholinesterase Inhibitor

4. FIRST AID MEASURES

First Aid

Swallowed:

If poisoning occurs, contact a doctor. Do not give fluids or induce vomiting if person is unconscious or having convulsions. Get affected person to a doctor or hospital promptly.

Skin:

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



Inhalation:

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

Eye:

Irrigate for 15 minutes with copious quantities of water with eyelids held open. Seek medical advice.

First Aid Facilities:

Atropine tablets 0.6 mg should be available in the area where this product is used, or in a nearby unlocked medicine cabinet.

Note to Physician:

A cholinesterase inhibitor. Treat symptomatically. In case of poisoning, use antidote immediately after establishing an open airway and respiration. Atropine injection is the profaned antidote. Oximes, such as PAM protoplasm may be used in conjunction with atropine.

5. FIRE FIGHTING MEASURES

There is a moderate risk of an explosion from this product. If it is involved in a fire, fire fighters should take care and appropriate precautions.

Fire and Explosion:

Flash point 36 °C

Toxic and corrosive gases may be evolved if involved in fires or exposed to extreme heat. Breathable air apparatus may be required in confined area. Stay upwind.

Flammable limits in air:

Not determined.

Auto ignition Temperature:

Not determined.

Extinguishing Media:

Use carbon dioxide or dry chemical for small fires and water fog or foam (alcohol, polymer or ordinary) for large fires. Cool containers from maximum distance.

Special fire fighting procedures:

Fire fighters should use self - contained breathing apparatus and full turnout gear. Prevent runoff of fire - water. Avoid exposure to smoke. (Keep upwind).



6. ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled:

Contain spill and absorb with sand or proprietary absorbent (vermiculate). Prevent from entering drains, waterway or sewers. Collect in sealed open top containeres for disposal

Disposal method:

Triple rinse containers, add rinsate to the spray tank, then offer container for recycling/ reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. On-site disposal of concentrate is not acceptable.

Container disposal:

Dispose of in an approved facility according to local regulations.

7. HANDLING AND STORAGE

Store the product in a well-ventilated, secure area out of reach of children and domestic animals. Do not use or store near heat or open flame. Do not store food or feed in storage area. Prevent eating, drinking or smoking in areas where there is a potential exposure to the product. Wash hands before eating, drinking or smoking after using the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards:

Exposure limits are not available for Fenitrothion. The ADI for Fenitrothion is 0.003 mg/Kg/day.

Engineering controls:

Natural ventilation only required when handling the concentrate. A local exhaust should be used in confined areas to keep the level of solvent within acceptable limits.

Ventilation:

Exhaust appropriate for removal of vapors.

Protective clothing:

Chemical resistant gloves, coveralls, apron and foot coverings.

Eye Protection:

Safety goggles or face shield.



User safety recommendations:

Safety showers and eye - wash should be easily accessible.

Personnel Protection:

The concentrate is harmful; skin absorption is the most common route of exposure. May irritate the eyes and skin. Repeated minor exposure may have cumulative effects. Avoid contact with eyes and skin. DO NOT inhale spray mist. When preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and face shield. If product spilled on skin wash affected area thoroughly with soap and water. 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 and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Assay	"Fenitrothion" 500 g/L
Appearance	Clear Brown Liquid free of visible impurities
Odour	Mild Aromatic
Density (Kg/L)	1.0746 g/ml
Flash Point	36°C
Solubility in Water:	Forms Emulsion

10. STABILITY AND REACTIVITY

Stability:	Stable under room temperature
Condition to avoid:	Contact with iron and strong alkalis and storage above 50°C.
Hazardous polymerization:	will not occur
Incompatibilities:	Avoid contact with strong oxidizers.

11. TOXICOLOGICAL INFORMATION

Toxicology Data (Technical Active Ingredient):

Acute Oral LD ₅₀ (rat)	1,700 – 1,720 mg/Kg
Acute dermal LD ₅₀ (rat)	810 – 840 mg/Kg
Toxic to fish	Yes
LC ₅₀ for blungill sunfish	0.002 - 0.010 mg/L (96h)
Toxic to Bees	Yes
Toxicity to birds	Moderate to highly toxic to birds
Toxicity of the product	Acute or LD ₅₀ rate > 3,400 mg/Kg



12. ECOLOGICAL INFORMATION

Toxic to fish and toxic to bees.
Do not spray and plants in flower while bees are foraging.
Do not contaminate dams, rivers or streams with pesticide or used container.
Do not use container for any other purpose.
Triple rinse containers and add rinsate to the spray solution.
Puncture top, bottom and sides of empty container, then crush and bury in an approved landfill, or bury under at least 500 mm of soil in a non- crop, non-pasture area away from water sources or homes.

13. DISPOSAL CONSIDERATION

Pesticide wastes are toxic. Do not reuse product containers. Dispose of product containers, waste containers and residues according to local health and environmental regulations.

14. TRANSPORT INFORMATION

Proper Shipping Name	Organophosphorus pesticide, liquid, toxic, Flammable (Fenitrothion)
UN number	UN No 3017
Class	6.1
Packing Group	III
Marine Pollutant	Yes

15. REGULATORY INFORMATION.

Fenitrothion (CAS: 122-14-5)
General use Pesticide
Signal word "Caution"

16. OTHER INFORMATION

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