



MATERIAL SAFETY DATA SHEET

ECTOCIDOL[®] 600EC

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

1. PRODUCT IDENTIFICATION

Product Name: **ECTOCIDOL[®] 600EC**

Active ingredient: **Diazinon (60% w/v)**

Chemical Class: Organophosphorus

Use: ECTOCIDOL[®] 600EC is an emulsifiable concentrate formulation of the organophosphorous "Diazinon". It contains 600 g/L of the active ingredient. It is used a veterinary ectoparasiticide for the control of sheep scab as well as the prevention and treatment of blowfly strike, ticks, and lice infestations on livestock.

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

Substance	Contents (g/L)	Chemical structure
DIAZINON Tech. CAS No. 333-41-5 IUPAC Chemical Name: O,O-diethyl O-2-isopropyl-6-methylpyrimidin-4-yl phosphorothioate	621.81 (=600.00 pure)	
Blend of ionic and non ionic surfactants	70.00	
Organic solvents	330.95	
Epoxidized Soybean oil	10.03	



3. HAZARD IDENTIFICATION

Signs of Poisoning:

Symptoms of acute exposure include Headache, dizziness, blurred vision, nausea, vomiting, diarrhea, and pinpoint pupils.

Primary Routes of Entry:

Skin and eyes contact, Ingestion.

Effects of single overexposures:

Swallowing: Headache, dizziness, blurred vision, nausea, vomiting, diarrhea, pinpoint pupils.

Skin Absorption: May cause irritation.

Inhalation: May cause irritation of eyes, nose and throat.

Eyes: May cause eye irritation.

Effects of Repeated Overexposure:

Prolonged or repeated may cause headache, dizziness, blurred vision, nausea, vomiting, diarrhea, pinpoint pupils, skin and/or eye irritation.

Other effects of overexposure:

Ingestion of large amounts may also cause pulmonary edema, muscle twitches and convulsions.

Existing Medical Conditions possibly Aggravated by Exposure:

Skin contact may aggravate preexisting skin conditions. Inhalation of mists may aggravate preexisting respiratory conditions.

Chronic:

No long - term effects other than symptoms associated with the anti-cholinesterase activity at high dose levels, occurred in any of the studies conducted with Diazinon.

Skin irritation or dermatitis may occur with frequent or prolonged contact.

Medical conditions known to be aggravated:

Exposure to cholinesterase inhibitors should be restricted in persons with hemolytic anemia or preexisting cholinesterase depression. Persons with respiratory disorder should use extra care in handling this product. Skin contact may aggravate an existing dermatitis condition.



4. FIRST AID MEASURES

Emergency and First aid Procedures

Swallowing: Calls a physician or poison control center. Do not induce vomiting.

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 administers artificial respiration. Avoid unprotected mouth-to-mouth resuscitation. GET MEDICAL ATTENTION.

Eye: Hold eyelids open and flush with a steady stream of water for at least 15 minutes. GET MEDICAL ATTENTION.

Note to Physician:

This product may cause cholinesterase inhibition. Emesis is not recommended due to the large amount of petroleum solvent. Check for mucosal damage before beginning gastric lavage, taking care to prevent aspiration. Atropine is antidotal and should be given IV in multiple doses. 2-PAM may be used in severe cases, provided therapy begins with 24 hours of exposure. Monitor serum and RBC cholinesterase.

5. FIRE FIGHTING MEASURES

Fire and Explosion:

Flash point: >40° C

Flammable limits in air:

Not determined.

Autoignition 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. Water steam may spread flames.

Unusual fire and explosion hazards:

Noxious fumes may be emitted under fire conditions.



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.

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled:

Dike the area using absorbent materials such as sand or clay. Recover and contain as much product as possible using absorbent. Clean spill area using a solution of water and detergent. Collect and contain wash water and all contaminated absorbent for disposal. If spilled on the ground, the affected area should be excavated to a depth of 1-2 inches. Prevent the spilled product or washing from reaching public sewers or waterways. Wear appropriate protective equipment during the cleanup. Ensure that tools and equipment are adequately decontaminated.

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

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

Protective equipment should be used during the following procedures:

- Manufacture, formulation or application of this product.
- Repair and maintenance of contaminated equipment
- Clear up of leaks and spills.
- Any other activity that may result in hazardous exposures.



Respiratory Protection:

Use NIOSH/MSHA approved respirator for organic vapors. Use positive pressure contained breathing apparatus where emergency conditions or where exposure limits are exceeded.

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:

May irritate the eye and skin. 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. 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

Appearance:	Clear Brown Liquid free of visible impurities
Water Content	<2.0 g/Kg
Flash Point	>40°C
Density:	0.935 Kg/L
Acidity as H₂SO₄	<0.5 g/Kg

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Condition to avoid: Excessive heat.

Materials to avoid: Strong oxidizers, acids, and alkalis.



Hazardous decomposition products:

Hydrogen cyanide, substituted pyrimidines. An impurity of toxicologic concern, thiono-tetraethyl-pyrophosphate (O-S-TEPP) can be formed when Diazinon-containing products are exposed to trace amounts of water.

Hazardous polymerization: will not occur

11. TOXICOLOGICAL INFORMATION

Toxicology Data:

Acute Oral LD₅₀ (rat): > 2600 mg / Kg

Diazinon Technical

Acute Oral LD₅₀ (rat): 1,553 mg/Kg
Acute Dermal LD₅₀ (rabbit): >2,020 mg/Kg
Acute Inhalation (4 h rat): 3.34 mg/L
Eye Irritation (rabbit): Moderate irritant
Dermal Irritation (rabbit): Mild irritant
Dermal sensitization: Not a sensitizer

Carcinogenicity, Teratogenicity and Mutagenicity:

Not listed as a carcinogen by NRC, IARC or OSHA

NOEL: (2 y) for rats 0.06 mg/kg b.w.;
(1 y) for dogs 0.015 mg/kg b.w.
daily, humans 0.02 mg/kg b.w.

ADI: 0.002 mg/kg b.w.

12. ECOLOGICAL INFORMATION

Keep out of water supplies ground water or open water. This product is toxic to bees, fish and wildlife including birds and waterfowl.

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:	Environmentally hazardous Substances, liquid, (Diazinon)
UN number	UN3082
Class	9.2
Packing Group	III
Marine Pollutant	Yes

15. REGULATORY INFORMATION.

WHMIS Classification for product: Exempt

Toxicity class: WHO (a.i.) II;

EPA (formulation) II or III

EC hazard Xn; R22| N; R50, R53

16. OTHER INFORMATION

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