



MATERIAL SAFETY DATA SHEET

Tiazinon 600EC

SECTION 1 – PRODUCT IDENTIFICATION

Product Name: Tiazinon 600 EC (Diazinon 600g/L)

Product Type: Organophosphate Insecticide

Manufacturer: Shanghai Chemepus Co. Limited

Add: 12/F Tungchun Commercial Center 438-444 Shanghai China

Recommended use: An insecticide for the control of insect pests on specified crops.

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS No	Content
Diazinon	333-41-5	600 g/L
Ingredients determined to be non-hazardous	-	To volume

SECTION 3 – HAZARDS IDENTIFICATION

6.1D acute toxicant,

6.8B reproductive or developmental toxicant,

6.9A target organ toxicant,

9.1A aquatic toxicant,

9.2B soil toxicant,

9.3A terrestrial vertebrate toxicant,

9.4A terrestrial invertebrate toxicant,

TOXICITY Harmful - may be harmful if swallowed, inhaled or absorbed through the skin. May cause damage to the nervous system from repeated oral exposure at high doses. May cause reproductive/development damage from repeated oral exposure.

ECOTOXICITY: Very toxic to aquatic organisms. Toxic to the soil environment. Very toxic to terrestrial vertebrates and terrestrial invertebrates. Very toxic to bees.

SECTION 4 – FIRST AID MEASURES

First Aid measures: Contact a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to mouth. Obtain medical attention.

Inhalation: Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.

Ingestion: Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. Seek medical assistance immediately.

Skin Contact: Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.

Eye Contact: Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance. Remove contact lenses, if present and easy to do.

Location

| Sapna Business Park (SBP) | | Kyang'ombe Road | | OFF ICD Road | | Nairobi - Kenya |



First Aid Facility: Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Advice to Doctor: Organophosphates: Initial Treatment: Atropine is the specific antidote. Large amounts are required in organophosphate poisoning. An initial trial dose of atropine 2mg intravenously should be given and repeated every 15 minutes until an atropine effect is noted (dilated pupils, dry mouth, flushing of the skin). Reduce to a schedule that maintains full atropinisation for at least 24 hours. The dose and frequency of atropine will vary from case to case. **Medical:** Take blood samples for cholinesterase levels before starting treatment. Stomach washout if organophosphate has been ingested. Pralidoxime enhances the reactivation of acetyl cholinesterase.

It is most effective if given early, but can still be started up to 48 hours after poisoning.

Pralidoxime is given at a dose of 1-2 mg by slow I.V. infusion at a maximum rate of 0.5gm/min. It is used as an adjunct to, not a replacement for atropine. **Respiratory Difficulty -** Carefully monitor for 24 hours. **Convulsions -** Control with Diazepam (Valium) 5-10mg by slow I.V. or I.M. repeat as necessary.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media: Water fog, foam, carbon dioxide or dry chemical. Choose extinguishing media to suit the burning material.

Unsuitable: Water in a jet.

Hazards from Combustion Products: Hazardous thermal decomposition products may include but not limited to: various aliphatic organophosphates, substituted pyrimidine and hydrogen cyanide. S-TEPP and diazinon may form when diazinon is reacted with trace amounts of water. Oxides of carbon, nitrogen, sulfur and phosphorus may also be formed. Sulphur dioxide is an irritant and may induce asthma. Nitrogen oxides are irritants to the lungs - may cause pulmonary oedema. Carbon dioxide causes asphyxia by displacing oxygen. **Equipment for fire fighters:** Special Protective Full protective clothing and self-contained breathing apparatus.

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: Use protective clothing and breathing equipment appropriate for the surrounding fire.

Specific Methods: Keep up wind. Do not allow washings to reach sewage or effluent systems.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Wear protective clothing. Clear area of unprotected personnel. Contain spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill. If spill is on the ground, the affected area should be removed to a depth of 2-3cm. Collect in an appropriate sealable container for disposal in an approved landfill. Decontaminate spill surfaces and equipment with 10% sodium hydroxide.

Location

| Sapna Business Park (SBP) | | Kyang'ombe Road | | OFF ICD Road | | Nairobi - Kenya |



SECTION 7 – HANDLING AND STORAGE

Avoid skin and eye contact and inhalation of spray mist.

APPROVED HANDLER: This product must only be applied by an approved handler or under the direct supervision of an approved handler.

RECORD KEEPING: Records of use must be kept.

Avoid contamination of any water supply with product or empty container.

Keep ducks and hens off treated areas for 7 days after application.

Keep out of reach of children.

Conditions for safe storage, including any incompatibilities: Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Storage must be in accordance with government legislation and regulations.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits: TWA: diazinon = 0.1 mg/m³ (skin)

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Wear appropriate respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form Liquid Appearance: A white emulsion

Odor: Not determined

Boiling Point: Not determined (diazinon = 83 -84°C @ 0.0002mm Hg)

Solubility in Water: Miscible, emulsifies

Specific Gravity 1.07

pH: 6.5 - 7.5 (1%w/v)

Vapour Pressure: 6.6x10⁻⁵mm Hg

Viscosity: 600 - 1200 cps

Flash Point: Not flammable

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable under normal conditions of handling and storage. Diazinon technical is stable at ambient temperatures and pressures but susceptible to oxidation above 100°C. Stable in neutral media, but slowly hydrolysed in alkaline media, and more rapidly in acidic media.



Compatible with metal drums coated with epoxy resin and aluminium or co extruded polyethylene containers.

Hazardous Decomposition Products: Avoid oxidising agents. Do not mix with copper compounds, Bordeaux mixture or lime sulphur. Avoid open flames, welding arcs or other high temperature sources which might induce thermal decomposition. Store away from sunlight or heat sources. **Hazardous Polymerization:** Hazardous polymerisation is not possible.

SECTION 11 – TOXICOLOGICAL INFORMATION

Diazinon is a cholinesterase inhibitor. Warning symptoms include weakness, headache, tightness of chest, blurred vision, non-reactive pinpoint pupils, nausea, salivation, sweating, vomiting, diarrhoea and abdominal cramps. May aggravate pre-existing medical conditions, such as asthma and inflammatory or fibrotic lung disease.

Acute Toxicity Oral LD50 (rat): 300mg/kg for diazinon

Acute Toxicity Dermal - LD50 (rat): 876mg/kg for diazinon

Acute Toxicity Inhalation - LC50 (rat): >1,600mg/m³/4h for diazinon

Ingestion - Moderately toxic by oral exposure. Aspiration into the lungs may cause chemical pneumonitis, which can be fatal.

Inhalation - Harmful by inhalation. May cause headache, nausea, dizziness and narcosis.

Skin Irritant- Harmful if absorbed through the skin.

Eye Irritant - Carcinogenicity Diazinon is non-carcinogenic (in rats).

Reproductive - Suspected reproductive/developmental toxicant (diazinon)

SECTION 12 – ECOLOGICAL INFORMATION

Persistence and degradability - Diazinon is not rapidly degradable. Mobility - Diazinon is fairly strongly adsorbed onto soil. Mobility is low. T_{1/2} = 2-4 weeks in soil. Environmental fate; Non phytotoxic when used as directed. Principle metabolites in animals are diethyl thiophosphate and diethyl phosphate. Degradation in soil and water oxidizes to the phosphate (diazinon) and hydrolysis.

Potential Bioaccumulative Diazinon does not bio -accumulate.

Other Precautions Keep ducks, geese and hens off treated areas for 7 days after application.

Acute Toxicity –

Fish For diazinon: LC50 (48h)

- Zebra danio >0.8 - <1.216mg/L
- Bluegill sunfish 16mg/L
- Rainbow trout 2.6 - 3.2mg/L

Acute Toxicity - Daphnia

- LC50 (48h) water flea 0.22-0.29µg/L
- NOEC (21d) daphnia magna 0.15µg/L

Acute Toxicity - Other Organisms

- Oral LD50 mallard duck 1.44mg/kg,



- young pheasants 4.3mg/kg (diazinon) LD50
- earthworm 130mg/kg of soil (diazinon)
- Highly toxic to bees LD50 (oral) 0.2µg/bee (diazinon)

SECTION 13 – DISPOSAL CONSIDERATIONS

Product Disposal: Disposal must be in accordance with label instructions and state/country, local laws and regulations.

Container Disposal: Triple rinse empty container and add rinsate to spray tank. Dispose according to the label instructions and state/country, local laws and regulations.

SECTION 14 – TRANSPORT INFORMATION

U.N. Number 3082

UN proper shipping ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
- (diazinon, 60%) name

Transport hazard 9 class(es)

Hazchem Code 2Z

Packing Group III

IERG Number 47

IMO Marine Pollutant - Yes. Environmentally Hazardous Substance mark required.

IMDG EMS F -A, S-F

Do not carry more than 10L of Tiazinon 600 EC on a passenger service vehicle.

SECTION 15 – REGULATORY INFORMATION

Not regulated.

SECTION 16 – OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Essence be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Essence has been advised of the possibility of such damages.

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