

Product Safety Data Sheet

1. Chemical product and company identification

- 1.1. **Prepared Date** : March. 10. 2024
- 1.2. **Product information** : -
Trade name : Delt -250 EC
- 1.3. **Information about manufacturer / supplier:**
Saudi Delta Company for Chemical Industries
Riadh – Saudi Arabia – 3rd Industrial City
Tel. 00966-1-2654533 Fax. 00966-1-2654532
P.O. Box 355809 Riyadh 11383 Saudi Arabia

2. Information on ingredients

2.1. Chemical properties (Component substances)

The product is a mixture of one active ingredient, emulsifiers, and solvent.

- Propiconazole 25% w/v (a.i.) (Used as a seed dressing)
- Emulsifiers 8% w/v (Anionic / non- ionic type)
 - Aromatic Solvent Up to 100% v

2.1.1. Amitraz :

- **Chemical Name:** (±)-1-2(2,4-dichlorophenyl)-4-propyl-1,3-dioxane-2-ylmethyl - 1 H-1,2,4-triazole
- **CAS No.** : 60207-90-1
- **Mol. Formula** : C₁₅H₁₇Cl₂N₃O₂
- **Mol. wt .** : 342.2
- **Physical Form** : Yellowish, odorless viscous liquid
- **Melting Point** : -23C (glass transition temp.)
- **Vapour Pressure** : 2.7 X10⁻² mPa (20C) ; 5.6 X10⁻² mPa (25C)
- **Specific Gravity** : 1.29 at (26C)
- **Kow Log P** : 3.72 (20C , pH 6.6)
- **Henry** : 9.2 X10⁻⁵ Pa m³ mol⁻¹ (20C)
- **pka** : 1.09 , v.weak base
- **Solubility** : In water about 100 mg/L (20C) . In hexane 47g/l,
Completely miscible with ethanol , acetone , toluene and n-octanol (25 C)
- **Stability** : Stable up to 320C ; no significant hydrolysis

2.1.2. Emulsifiers :

A combined anionic/nonionic emulsifiers specially intended for formulation of pesticide.

Composition	: 15-30% calcium dodecyl benzenesulfonate. 10-20% n-Butanol. 30-60% polyalkyleneoxidederivative.
Appearance	: Clear yellow-brown liquid and cloudy yellow liquid.
Density	: 0.99-1.01 gm/ml (20C).
Flash point	: 37 C. Pour point
: 1150 mPa s.	: 2-3 C. Viscosity
Solubility	: Soluble in Isopropanol, Octanol, water, and exylene in soluble in kerosene and mineral oil.

2.1.3. Aromatic Solvent:

CAS No.	: 68920-06-9 SHA: 086803
Composition	: Dimethylbenzene (ortho, meta, and para isomers).
Properties	: Volatile. Petroleum distillate (75-100% aromatic hydrocarbon), B.P.: 175-300 F.

3. Hazard Identification

3.1. Dangerous Substances : Contains Propiconazole and aromatic substance (Solvent).

3.2. Important Hazardous : Propiconazole is harmful or fatal if swallowed. Causes eye or skin irritation. Skin contact may cause allergic. Don't get in eyes, on skin or in clothing. Avoid breathing vapors or spray mist.

3.3. Signs and Symptoms of over-exposure : Primary entrance tracts into the organism: Dermic, inhalation. Tebuconazole is classified in category C/D of EPA-USA (low possibility of carcinogenic potential on human beings), based on studies carried out on female mice, with doses above tolerance. It can cause nausea, vomiting, abdominal pain, diarrhea, depression, fatigue, dyspnea, arterial hypertension. There is not any known case of severe poisoning on human beings.

4. First aid Measures

If Swallowed : Do not induce vomiting. Contains xylene-range aromatic solvent. Call a physician immediately. See "Note to Physician".

If In Eyes : Flush with plenty of water while holding eyelids open. Call a physician immediately

If On Skin : Wash hands with soap and water each time before eating, drinking, or smoking. At the end of the working day, bathe entire body with soap and plenty of water.

If Inhaled : Remove to fresh air, Support respiration and contact a physician if necessary.

5. Fire Fighting Measures

5.1. Extinguishing media:

- 5.1.1. Suitable: Carbon dioxide, foam, water fog, dry chemical and halogenated agents.
- 5.1.2. Not to be used: Don't use water except in case important fire.
- 5.1.3. Protection against fire: Keep a way from sources of ignition.

6. Accidental Release Measures

6.1. Personal precautionary measures:

- 6.1.1. **Respiratory protection:** In case of insufficient ventilation wear pesticide respirator jointly approved by the local authorities.
- 6.1.2. **Protective gloves:** wear heavy duty, natural rubber gloves, or chemical resistant gloves such as Barrier laminate or Nitrile Rubber or. Neoprene rubber or viton.
- 6.1.3. **Eye protection:** wear safety goggles.
- 6.1.4. **Other protection:** wear water-proff pants, coat, hat, rubber boots or rubber overshoes.

6.2. Environmental Precaution: Stop any eventual leakage.

6.3. After spillage / leakage on soil: Liquid spillage should be dammed off and pumped into containers; soak up remainder with absorbent material and dispose of in accordance with local regulations.

7. Handling and Storage

- 7.1. Don't apply when weather conditions favor drift from treated area. Don't contaminate lakes, streams, ponds. When using don't eat, drink, or smoke. Don't breath spray. Wash hands and exposed skin before meals and after work.

Wash out container thoroughly and dispose of safety. Store in original container in a cool, dry, well-ventilated, secure area out of reach of children and animals store in original container, tightly closed in a safe place.

8. Exposure controls, Personal Protections.

- 8.1. **Personal Protection:** Don't breath spray, after treatment, wash and change clothes prior anything else like eating, drinking, or smoking.
- 8.2. **Respiratory Protection :** Wear a suitable mask.
- 8.3. **Skin Protection :** Wear a suitable protective clothing mask.
- 8.4. **Eye Protection :** Wear eye, face protection.
- 8.5. **Ingestion :** Don't eat, drink, or smoke during application.

9. Physical and chemical properties

9.1. Shape	: Liquid
9.2. Colour	: Pale brown liquid
9.3. Odour	: Aromatic odour
9.4. Product Use	: Agricultural uses(Fungicide)
9.5. Melting point	: Not applicable
9.6. Density (gm/ml) (20o)	: 1.01
9.7. Viscosity (CPS) 25 oC	: 25
9.8. Solubility in water	: Forms white emulsion
9.9. Flash point oC	: 25 C
9.10. pH (1% aq. emul.) w/v	: 4-8
9.11. Flammable limits	: Not available

10. Stability and Reactivity

10.1. Hazardous Decomposition : Propiconazole stable. Hydrolysis half-life in aqueous buffer at pH7 is about 6 hrs, at 20C; Hydrolysis is more rapid in acid than in alkaline solution. On prolonged storage under moist conditions, slow decomposition occurs. UV lights appears to have little effect on stability.

10.2. Environmental Fate :

Animals : After oral administration to rats , propiconazole is rapidly absorbed and almost completely eliminated with urine and faeces. Residues in tissues were generally low and there was no evidence for accumulation or retention of propiconazole or its metabolites . The major sites of enzymic attack are the propyl side-chain and the cleavage of the dioxolane ring ,together with some attack at the 2,4-dichlorophenyl and 1,2,4-triazole rings . In mice ,the major metabolic pathway is via cleavage of the dioxolane ring

Plants : Degradation proceeds through hydroxylation of the n-propyl side –chaine and deketalisation of the dioxolan ring.After cleavage of triazole, triazole-alanine is formed as the main metabolite . Metabolites are conjugated mostly as glucosides .

Soil and Water : DT50 in aerobic soils (20-25C) 29-70 d. DT50 from water 6.4 d. the main degradation pathways are hydroxylation of the propyl side-chain and the dioxolane ring , and finally formation of 1,2,4-triazole. Immobile in soil; adsorption coefficient normalized to organic carbon $K_{OC(ADS)}$ 950 ml/g .

11. Toxicological Information

- 11.1. Acute oral LD50 for rats 1512 mg/kg , mice 1490 mg/kg.
- 11.2. Acute percutaneous LD50 for rats >4000 mg/kg , rabbits>6000 .not irritant to to eyes(rabbits)
- 11.3. Inhalation LC50 (4 hr) for rats >5800 mg/m³ air (aerosol).
- 11.4. NOEL (Tech.) : In 2 years for rats 3.6 dogs 1.9, mice 10 mg/kg diet.
- 11.5. ADI (JMPR) 0.07 mg/kg b.w (2004)
- 11.6. Toxicity class : WHO II
- 11.7. Other : not mutagenic , not teratogenic , no carcinogenic for human exposure

12. Ecological Data

12.1. Environmental Hazards:

This product is toxic to fish. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish in adjacent sites. Do not contaminate water by cleaning of equipment or disposal of equipment wash waters. Apply this pesticide only as specified on this label. Do not apply this product through any type of irrigation system

12.2. Birds : Acute oral LD50 for Jpanese quail 2223,female , bobwhite quail 2825 mallard ducks >5620 ,Peken ducks >10000ppm

12.3. Fish: LC50 (96 hr) for rainbow trout 4.3-5.3 , bluegill sunfish 6.4, Carp 6.8 , golden orfe 5.1 mg/L.

12.4. Bees: LD50 (contact and oral) 46->203 g/bee

12.5. Daphnia: LC50 (48 hr) 10.2 mg /L .

12.6. Other aquatic spp.: LC50(96h) for crayfish 42 mg/L.

12.7. Other beneficial spp.: Use under field conditions is not expected to result in adverse effects on soil micro-organisms or on non –target arthropods

13. Disposal Considerations

13.1. Pesticides Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or reinstate is a violation of Federal law. If these wastes cannot be disposed of use according to label instructions contact. Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

13.2. Container disposal

13.2.1. Metal containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by local authorities. Do not cut or weld metal containers.

13.2.2. Plastic containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by authorities, by burning. If burned, stay out of smoke.

13.2.3. Returnable / Refillable Sealed Containers: Don't rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

14. Transport Information

GGVE/GGVS : 6.1/ II

RID/ADR: 6.1

IMDG-Code : 6.1/ II

EMS:----

MFAG : ----

IATA/ICAO : 6.1 II

UN: ----

PAX: ----

CAO: ----

15. Regulatory Information

15.1. **Toxicity Classifications** : Moderately Hazardous

Warning Symbol :

X

15.2. **R-Phrase** :

R-22 : Harmful if swallowed

R-10 : Flammable

R-20/21 : Harmful by inhalation and in contact with skin .

R-38 : Irritating to skin .

15.3 **S-Phrase** :

S-22 : Don't breath dust.

S-26 : In case of contact with eyes, rinse immediately with plenty of water
and seek medical.

S-25 : Avoid contact with eyes.

16. Other Information

16.1. **Note to Physician:**

If swallowed, use gastric labile. Avoid aspiration.

16.2. **Antidote:**

There is no any specific antidote. Symptomatic and support treatment.