Product Safety Data Sheet

1. Chemical product and company identification

1.1. Prepared Date : Sept. 6 . 2023

1.2. Product information : -

Trade name : Alphatrin-100 E.C.

1.3. Information about manufacturer / supplier :

Saudi Delta Company for Chemical Industries
Riyadh – Saudi Arabia – 3rd Industrial City
Tel. 00966-1-2654533 Fax. 00966-1-2654532
P.O. Box 355809 Riyadh 11383 Saudi Arabia

2. Information on ingrediants

2.1. Chemical properties (Component substances)

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

- Alpha-Cypermethrin: 10% w/v (Non systemic insecticide with contact and stomach action)
- Emulsifiers: 7% w/v (Anionic / non- ionic type)
- Aromatic Solvent: Up to 100% v

2.1.1. Alpha Cypermethrin:-

- Chemical Name : A racemate comprising (S)-α-cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-= dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and (R)-α-cyano-3-phenoxybenzyl (1S, 3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate.

Roth: A racemate comoprising (S)-α-cyano-3-phenoxybenzyl (1R)-cis-3-(2,2-dichlorovinyl)-=2,2-dimethylcyclopropanecarboxylate and (R)-α-cyano-3-phenoxybenzyl (1S)-cis-3-(2,2-=dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate.

-CAS No. : [67375-30-8] correct sterochemistry; [52315-07-8] (Formerly
[86752-99-01], [86753-92-6]).
-Composition :Tech. Grade alpha-cypermethrin is > 90% pure m/m, typically > 95%.
- Mol. Formula :$C_{22}H_{19}Cl_2NO_3$
- Structural Formula :

- Mol. wt . : 416.3 - M.P : 82.5°C (97.3%), .82.1C (98.8%)
- B.P. : 200°C/0.07mmHg - V.P. : 0.00038 mPa (20°C)
- S.G./Density : 1.33 (20-25°C) - Kow: 8700000 (pH).
- Solubility : In water c. 0.01 mg/1 (25°C). In acetone 620, dichloromethane
550, cyclohexanone 515, ethyl acetate 440, chlorobenzene 420,
acetophenone 390, o-xylene 350, hexane 7 (all in g/l, 25°C). In
maize oil 19-20, ethylene glycol < 1 (both in g/kg at 20°C).
- Stability : Very stable in neutral and acidic media. Hydrolysed in strongly
alkaline media. Thermally stable up to 220°C. Field data indicate that in practice it is stable to air and light.
- ***Flash point : > 80 ℃ (Closed cup).***

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 (20 °C)
Flash point :	37 °C .
Pour point :	2-3 °C .
Viscosity :	1150 mPa s .

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**: Alpha-Cypermethrin has alow mammalian toxicity.

3.2. **Important Hazardous**: Solvent may be present aspiration hazardous.

3.3. **Sings and Symptoms of over-exposure** :

Pyrethroids have generally low toxicity to mammals , forming the basis of their favorable selectivity . Although all pyrethroids are convulsants they can be divided into two major classes based on neurophysiological toxicological ,

and pharmacological effects in a variety of spicies .

The non cyano pyrethroids (type I) include the agents permethrin and tetramethrin and cause hyperactivity, tremor and predominantly clonic convulsions. And the pyrethroids containing ∝-cyano substitunet (type II) include the agents cypermethrin, tetramethrin , and fenvalerate have nerve effects and toxicological manifestations, and the signs of poisoning resemble those of pycrotoxinin and include salivation, hyperactivity , choreoathetosis , and clonic/tonic convulsions .

4. First aid Measures

Eyes :immediately flush for 15 minutes with large amount of water.

Skin :remove all contaminated clothing atonce ; thoroughly wash with soap and water

Ingestion :Don't induce vomiting or administer liquids .

Vomiting should be induced only under professional supervision. Keep patient prone and quiet . Only a physician should induce vomiting as first aid for this slightly toxic substance due to increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent .

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 weare apesticide 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 ruber overshoes.

6.2. **Environmental Precaution** : Stop any evertual leakage.

6.3. **After spillage / leakage on soil**: Liquid spillage should be damned 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	: Yellowish
9.3.	Odour	: Aromatic
9.4.	Product Use	: Agricultural use
9.5.	Melting point	: Not applicable
9.6.	Boiling point	: Not available
9.7.	Specific gravity (20^{o})	: 0.90
9.8.	Vapour pressure (mm Hg)	: Not available
9.9.	Viscosity (CPS) 25 ^{o}C	: 23 CPs
9.10.	Solubility in water 25 ^{o}C	: Forms white emulsion
9.11.	Flash point ^{o}C	: > 25 ^{o}C
9.12.	PH (1% aq. Emul.) w/v	: 4-7
9.13.	Flammable limits	: Not available

10. Stability and Reactivity

10.1. **Hazardous Decomposition**:Alphatrin100 E.C is stable under normal conditions (25^{o}), stable in neutral and slightly acidic media , stable to U.V.

10.2. **Dangerous products of decomposition** : Non known .

11. Toxicological Information

For Technical :**Acute oral** LD_{50} for rats 79-400 mg/kg (in corn oil, value depending on concentration), 474 mg tech. /kg. **Skin and eye** Acute percutaneous LD50 for rats and rabbits > 2000 mg tech./kg; minimal irritant to the eyes of rabbits. **Inhalation** LC50 (4 h) for rats 0.32 mg/l air. **NOEL** In

90 d feeding trials, rats receiving 60 mg/kg diet showed no ill-effects.

Toxicity class WHO II; EPA II.

12. Ecological Data

For Technical :**Birds** LD_{50} for quail and mallard ducks > 10000 mg/kg. **Fish** LC_{50} (96 h) for rainbow trout 0.0028 mg/l; no toxic effect observed to fish under field conditions. **Bees** Toxic to bees. LD_{50} (24 h) 0.059 µg/bee. No toxic effect under field under field conditions. **Daphnia** EC50 (48 h) 0.1-0.3 µg/l. **Other beneficial spp**. LD50 (14d) for earthworms > 100 mg/kg artificial soil.

13. Disposal Considerations

13.1. Pesticides Disposal

Pesticide wastes are toxic . Improper disposal of excess pesticide , spray mixture , or rinsate is a violation of Federal law . If these wastes cannot be disposed of use according to label insturctions 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 ercycling 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 rins container. Do not empty remaining formulated product . Do not break seals . Return intact to point of purchase .

14. Transport Information

GGVE/GGVS : 6.1/III RID/ADR : 6.1
IMDG-Code :6.1/ III EMS :---- MFAG : ----
IATA/ICAO : 6.1 III UN : ---- PAX : ---- CAO : ----

15. Regulatory Information

15.1. Toxicity Classifications : Moderately Hazardous
Warning Symbol : [X] [ ]

15.2. R-Phrase

R21/22 : Harmful in contact with skin and if swallowed
R36/38 : Irritating to eyes and skin .
R10 : Flammable
R20 : Harmful by inhalation

15.3 S-Phrase

S22 : Don't breath dust .
S26 : In case of contact with eyes , rinse immediately with plenty of water and seek medical advice .
S37/39 : Wear suitable gloves and eye / face protection ..
S25 : Avoid contact with eyes .

16. Other Information

Note to Physician :

Like the natural pyethrins , the synthetic derivative is expected to have relatively minor toxicity in humans ; in fact , any significant acute toxic effects are more likely from a carrier hydrocarbon solvent . Consequently , induction of vomiting may increase th likelihood of the most important toxic potential , chemical pneumonia , and so should either be avoided or done only under medical supervision . Ingestion of a large amount calls for gastric lavage , with care (Trendelenburg position , suction available , cuffed endotracheal tube if patient is unconscious) to avoid intrapulmonary as-poration . A saline cathartic (sodium or magnesium sulfate) , 15-30 gm dissolved in water should be given , as should 15-30 gm activated charcoal as a slurry in water . Digestible fats , oils or alcohol may increase absorption and so should . Skin contact (vapor or powder) may be followed by transient tingling or numbness , usually of the face , but this subsides without treatment