

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name : Deltamethrin 98% TC

Chemical Name : S)- α -cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dibromovinyl)-2,2-dimethylcyclopropanecarboxylate

Type : Insecticide

Molecular formula : $C_{22}H_{18}Br_2NO_3$

2. Composition/Information on ingredients

Chemical Name	CAS#	Percent or content(w/v)
Deltamethrin	52918-63-5	98.00
Other	-	2.00

3. Health Hazards Identification

Emergency Overview :

Dangerous for the environment Harmful in contact with skin; readily absorbed through skin system
Toxic by inhalation. Very toxic if swallowed May cause sensitization by inhalation and skin contact
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Target organ(s): central nervous system, cardiovascular system Information pertaining to particular dangers for man and environment:

HMIS Ratings: Health =1 Flammability =0 Reactivity =0.

4. First Aid Measures

EYES: Flush with plenty of water for 5 minutes.

SKIN: Flush with copious amounts of water; remove contaminated clothing and shoes; call a physician.

INGESTION: If swallowed, wash out mouth with copious amounts of water; call a physician.

INHALATION: If inhaled, remove to fresh air; if breathing is difficult, give oxygen; if breathing stops, give artificial respiration.

Antidotes / Dosage: Inject atropine IV or IM (0.4-2.0 mg/Kg.) every 15 min. until atropinised or Universal antidote (A mixture containing 2 parts activated charcoal, 1 part MgO and 1 part tannic acid in 300 ml warm water.

5.Fire Fighting Measures

FLAMMABILITY: Not easily flammable

FLASH POINT (°C): 58°C

AUTO - IGNITION TEMP.(°C): Not Applicable

LOWER EXPLOSION LIMIT: Not Explosive

SUITABLE EXTINGUISHING AGENTS: water spray, carbon dioxide, dry chemical powder or foam Protective equipment: wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

UNUSUAL FIRE HAZARD: may emit toxic fumes under fire conditions.

HAZARDOUS COMBUSTION PRODUCTS: Under fire conditions some components of this product may decompose. Hazardous combustion products may include and are not limited to sulfur oxides, phosphorus compounds, nitrogen oxides, hydrogen chloride, carbon monoxide, and carbon dioxide.

6.Accidental Release Measures

PERSON-RELATED SAFETY PRECAUTIONS: cordon off area of spill; wear self contained breathing apparatus, protective clothing and heavy rubber gloves.

MEASURES FOR CLEANING/COLLECTING: absorb solutions with finely-powdered liquid-binding material (diatomite, universal binders); decontaminate surfaces and equipment by scrubbing with alcohol; dispose of contaminated material according to Section 13.

7.Handling and Storage

INFORMATION FOR SAFE HANDLING: avoid contact with skin, eyes and clothing; material may be an irritant.

STORAGE: Store solid and solutions at room temperature.

8.Exposure Controls/Personal Protection

Personal protective equipment

Respiratory protection: approved respirator

Protective gloves: rubber gloves

Eye protection: Goggles

Industrial hygiene: use good industrial hygiene. Wear face shield or goggles, elbow length PVC gloves, cotton overalls buttoned to the neck and wrist, washable hat and half face respirator with dust and vapor cartridge. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

9. Physical and Chemical Properties

Color: Colorless crystals
Physical state: Solid
Melting point: 100-102°C
Vapor pressure: 1.24×10^{-5} mPa at 25 °C
Density: 0.55 g/cm³
Solubility: In water <0.2 mg/l

10. Stability and Reactivity

Conditions to avoid: Heat and light
Hazardous decomposition products: Avoid acids and bases
Hazardous reaction: Will not occur

11. Toxicological Information

Acute Oral: 135 mg/kg (rats)
Acute Dermal: >2000 mg/kg (rats)
Acute Inhalation: >2.2 mg/l (rats) [a.i.]
Acute Other routes: No Data applicable
Eye Irritation: Mild eye damage.
Skin Irritation: Non irritation.

12. Ecological Information

FISH TOXICITY:

96 hour LC50, Rainbow trout – 0.91 µg/l, bluegill sunfish 1.4 µg/l.

AVIAN TOXICITY:

Acute oral LD50 for mallard ducks >4640 mg/kg.
Dietary LC50 (8 d) for mallard ducks >8039, quail >5620 mg/kg diet.

BEE TOXICITY: Toxic to bees. LD50 (oral) 79 ng/bee; (contact) 51 ng/bee

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CIN No: U51909DL2011PTC219722

13. Disposal Considerations

Do not contaminate food, feed, or water by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of law. Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of in accordance with applicable local, state or federal requirements.

14. Transport Information

DOT Hazard Class: 6.1, (3)

Proper shipping name: none

Non-Hazardous for transport: This substance is considered to be non-hazardous.

Packaging Group: III

Proper shipping name: none

15. Regulatory Information

EU Risk and Safety phrases:

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S28: After contact with skin, wash immediately with plenty of water

S29: Do not empty into drains

S36/37/39: Wear suitable protective clothing, gloves, and eye/face protection

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S53: Avoid exposure - obtain special instructions before use

R21: Harmful in contact with skin

R23: Toxic by inhalation

R27/28: Very toxic in contact with skin and if swallowed.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.