

1: IDENTIFICATION

Chemical Name	2-(2-Chloro-4-(methylsulfonyl)-3-((2,2,2-trifluoroethoxy)methyl)cyclohexane-1,3-dione		
Synonyms	Tembotrione 34.4% SC	Trade Name	TERYN
Uses	Herbicide	Molecular Formula	C ₁₇ H ₁₆ ClF ₃ O ₆ S
Manufacturer/ Supplier	Ulink AgriTech Pvt. Ltd. Office Nos. 001 And 002, Ground Floor Wing "A" And Nos. 003 And 004 Ground Floor Wing "B", Nyati Tech Park, Wadgaon Sheri, Pune - 411014, Maharashtra		
Emergency Contact	9503095030	E-mail	info@agrostar.in

2: COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Name	CAS #	Percent or Content (w/w)
Tembotrione	335104-84-2	34.4
ethyl 5,5-diphenyl-2-isoxazoline-3-carboxylate	163520-33-0	17.2
Fatty alcohol ethoxylate	68131-39-5	1

3: HAZARD IDENTIFICATION

Physical/Chemical Hazard:	Not Classified
Human Health Hazard:	Not Classified
Environmental Hazard:	Very toxic to aquatic organisms, may cause long term adverse effects in aquatic environment

4: FIRST AID MEASURES

General: Remove victim from polluted area. Place in the recovery position. Remove contaminated clothing. Dispose in a safe manner.
Inhalation: Remove victim to fresh air. Keep the victim warm. Allow victim to rest. Immediately get medical attention.
Ingestion: Rinse mouth. Do not induce vomiting. Seek medical attention immediately.
Skin Contact: Change contaminated clothing immediately.
Eye Contact: Rinse immediately with plenty of water. After 5 minutes remove contact lenses if present. Rinse again with plenty of water. Continue to rinse with eyelid wide open for at least 15 minutes. Seek medical attention if irritation develops.
Note to Physician: Treat symptomatically. If a larger quantity swallowed: Gastric lavage may be effective when performed within 2 hours after ingestion. However, the application of activated charcoal and sodium sulfate is always advisable.

5: FIRE FIGHTING MEASURES

Extinguishing Media: Water fog. Alcohol resistant foam. Dry chemical powder. Carbon Dioxide

Unsuitable Extinguishing Media: Do not use water jet, as this may spread the fire.

Hazardous Thermal (de)composition: Harmful and toxic vapours/gasses

Special Procedures: Do not discharge extinguishing water into the environment. Move containers away from area if it can be done without risk. If possible remove containers from fire zone, cool them with water spray

Protection of Fire Fighters: Wear a self contained breathing apparatus. Wear suitable protective gloves and eye/face protection.

6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with spilled products or contaminated surfaces. Do not eat, drink or smoke.

Environmental Precaution: Prevent entry to sewers and public waters. Notify the authorities if product enters sewers or public waters.

Methods for Cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. Collect spilled material in sealed containers. Remove according to national or local legislation clean the polluted area. Do not dump into the sewer, On the ground or into any body of water.

7: HANDLING & STORAGE

After Spillage and/or Leakage: Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13. check also the local procedure.

Handling: Use only in areas provided with appropriate exhaust ventilation. Handle in accordance with good industrial hygiene and safety practise. For personal protection see 8.

Technical Protective: No special measures required.

Storage: Store in dry, cool, well-ventilated area. Store in an area between 0°C and 40°C. Protect from freezing. Keep away from food, drink and animal feeding. Do not allow unauthorized persons to enter.

Packaging Material: HDPE (polyethylene high density). **Storage Away From:** Direct sunlight. Extremely high or low temperatures.

8: EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Measures: Provide adequate ventilation.

Hygiene Measures: Refer to COSHH assessment (control of Substances Hazardous to Health)Amendment Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials. When using, do not eat, drink or smoke. Change contaminated clothing immediately. Wash clothing before reusing. Wash hands and face after handling thoroughly with soap and water. If necessary, take a shower.

Occupational Exposure Limits: Tembotrione : TWA 0.15 mg/m3, ethyl 5,5-diphenyl-2-isoxazoline-3-carboxylate : TWA 1.0 mg/m3

Personal Protection: Follow all precautions and instructions on the label. In all other cases the following recommendations would apply.

Respiratory Protection: No special protection equipment is required under normal conditions of use. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonable practicable steps have been taken to reduce exposure at sources e.g. containment and/or local extract ventilation. Always follow the respirator manufacturer's instructions regarding wearing and maintenance.

Skin Protection: Suitable protective clothing. Wear coverall and type 6 suits. Wear two layers of clothing where possible. A cotton or cotton/polyester coverall must be worn under the chemical protection clothing and cleaned frequently by an industrial laundry. If a chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by the manufacturer.

Hand Protection: Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness 0,40mm). Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet.

Eye Protection: Wear goggles conforming to EN166 (Field of Use 5 or equivalent).

Others: Wash clothing before reusing.

9: PHYSICAL/CHEMICAL PROPERTIES

Appearance : Suspension concentrate

Relative Vapour Density (air=1): Not established.

Physical State: Liquid

Colour: Whitish to yellow

Odour : Weak, Characteristic.

Boiling Point [°C]: No data available.

pH : 3 - 5.5 @ 23°C,

Density [g/cm3]: 1.22 @ 20 °C

Vapour Pressure: No data available.

Surface Tension: No data available.

Auto Ignition Temperature [°C]: No data available

Flash Point (°C) : > 100.

Solubility in Water: In water, the material forms a suspension.

Explosion Properties: No explosive properties.

10: STABILITY & REACTIVITY

Stability: Stable under normal circumstances. See also chapter 7.

Hazardous Decomposition Products: No decomposition products expected under normal conditions of use.

Hazardous Reactions: None under normal conditions.

Materials to Avoid: No specific substances.

Conditions to Avoid: Extremely high or low temperatures. Direct sunlight.

11: TOXICOLOGICAL INFORMATION

Rat oral LD50 [mg/kg] : > 1,750

Rat inhalation LC50 [mg/l/4h] : > 2.1 (highest achievable concentration)

Dermal (rat) LD50 [mg/kg] : > 5,000

Skin irritation (rabbit): Slightly. Labeling not required

Eye irritation (rabbit): Mild eye irritation.

Sensitization: Non- sensitizing. (OECD 406, Buehler test)/guinea pig,

12: ECOLOGICAL INFORMATION

Ecotoxicity

LC50 - 96 rainbow trout [mg/l] : 5.41

EC50-72H-Algae [mg/l] : > 15.4

EC50-48H-Daphnia Magna mg/l : 33.5

13: DISPOSAL CONSIDERATION

Waste-disposal Procedures: Remove as chemical waste, according to national or local legislation. Advice may be obtained from the local waste regulation authority

Contaminated Packaging: Dispose of in a safe manner. According to national or local legislation. Do not reuse empty containers. rinsing three times. Add washings to the sprayer at time of filling. Follow advice on product labels and/or leaflets.

14: TRANSPORT INFORMATION

UN No. 3082 **Proper Shipping Name:** Environmentally hazardous substance liquid, n.o.s (Tembotrione Solution)

Land Transport (ADR/RID): Class-9, Packing Group-III, Hazard Identification number-90, Hazard Label-9, Item Number- Tunnel Code: E

Sea Transport (IMO/IMDG): Class-9, Packing group-III, Marine Pollutant-Yes

Air Transport (IATA): Class-9, Packing group-III, Environmental hazard mark-Yes

15: REGULATORY INFORMATION

U.S. EPA Status: Registered under FIFRA

WHMIS Classification (Canada): Class D-2B (Toxic Material)

TSCA: Not listed

EU Classification: Hazardous according to Regulation (EC) No 1272/2008

16: OTHER INFORMATION

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