

Material Safety Data Sheet : TEBUCONAZOLE TECHNICAL

1. Chemical Product and Company Identification

Product Name	: Tebuconazole Technical
Formula	: C ₁₆ H ₂₂ ClN ₃ O
Molecular Weight	: 307.8
Chemical Name	: (±)-α-[2-(4-chlorophenyl)ethyl]-α-(1,1-dimethylethyl)-1H-1,2,4-triazol-1-ethanol
Manufacturer	: Sumitomo Chemical India Limited Corporate Office : 13 / 14 Aradhana Industrial Development Corporation, Near Virwani Industrial Estate, Goregaon (East), Mumbai – 400 063
Emergency Contact Details	: +91 22 4252 2200 : +91 22 4252 2209 : +91 278 2212320
Email	: msds@sumichem.co.in
URL	: http://www.sumichem.co.in

2. Composition/Information on Ingredients

Component	CAS No.	% W/W content
Tebuconazole	107534-96-3	98 minimum

3. Hazard Identification

Emergency Overview

Appearance and odour : White crystalline powder, no characteristic odour

Warning Statements : Keep out of reach of children

Potential Health Effects

Likely Routes of Exposure : Skin contact, Inhalation and Ingestion

Eye Contact : Mild irritant to the eyes

Skin contact : Mild irritant to skin

Ingestion : May be harmful if swallowed. .

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Inhalation : Unlikely to be harmful by this route.

Environmental Hazards : The product is a fungicide

4. First aid measures and Antidote

Emergency and First Aid Procedure –

- If in Eyes** : Immediately flush with plenty of clean water for 15-20 minutes. Remove contact lenses if present after 5 minutes of washing. Get medical attention
- If on Skin** : Wash with plenty of clean water and soap. Get medical attention.
- If Inhaled** : Remove person to fresh air, if required give artificial respiration. Call doctor or poison control centre.
- If Swallowed** : Immediately offer drinking water to the person, if able to swallow. Do not induce vomiting, but do not stop if it happens spontaneously. Get medical attention
- Note to Physician** : Treat symptomatically.
- Antidote** : Not known.

5. Fire Fighting Measures

- Hazardous product of Combustion** : The essential breakdown products are carbon monoxide, carbon dioxide and nitrogen oxides.
- Extinguishing Media** : Foam, Dry chemical powder, CO₂ type fire extinguisher or Flood with water.
- Unusual Fire and Explosion Hazards** : The product does not pose any unusual fire hazard. It is advisable for firemen to avoid direct contact.
- Fire Fighting Equipment** : Evacuate area and fight fire from a safe distance. Approach from upwind to avoid hazardous vapours and decomposition products. Use self-contained breathing apparatus. Used equipments should be thoroughly decontaminated

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6. Accidental Release Measure

- Personal Protection** : Observe all protection and safety precautions. Depending on the magnitude of the spill, use of eye protection, gloves and boots when cleaning up spills are recommended. For PPE see Section 8
- Steps to be taken in case of a spill** : It is recommended to have a predetermined plan / SOP for the handling of spills.
- Stop the source of the spill immediately, if safe to do so. Contain the spill to prevent any further contamination of soil or water.
- Keep all bystanders away. Wear full-length clothing and PVC gloves. Shovel and collect the spilled material / contaminated absorbent and place in suitable containers. Thoroughly scrub the floor or other impervious surfaces with a strong industrial detergent and rinse with water.
- Spills in water** should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal through incineration.

7. Handling and Storage

- Precautions in Handling** : In an industrial environment, such as while making formulation, filling or packing, it is recommended to avoid physical contact with the product and to have adequate ventilation.
- Avoid spillage into the eyes, or contact with bare skin or clothing. Avoid inhaling spray mist. Wash hands, feet, face thoroughly after handling. Remove contaminated clothing immediately
- Precautions in Storage** : The product is stable under normal conditions of warehouse storage. Keep container lids tightly closed
- Store in a cool, dry, well-ventilated place away from foodstuffs, animal feed under lock & key
- Specific Use** : The product is meant / approved to be used as fungicide.

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8. Exposure Controls/Personal Protection

- Exposure Limit Values** : Exposure limits have not been established for Tebuconazole or any other component of this product. However, exposure limit values defined by local regulations may exist and must be checked / observed.
- Personal Protection** : When used in a closed / automated system, personal protection equipment may not be required. When closed system is not possible in case of maintenance, repair, sampling etc, systems must be made nonhazardous before opening
- Respiratory Protection** : The product is not likely to pose inhalation exposure concern during normal handling. In the event of an accidental discharge of the material during manufacture or handling which produces a dust or mist, workers should put on respiratory protection equipment with a universal filter
- Protective Gloves** : Wear appropriate gloves
- Eye Protection** : Wear goggles, face shield or safety glasses. It is recommended to have an eye wash fountain available in the work area.
- Skin Protection** : Wear appropriate protective clothing to prevent direct skin contact

9. Physical and Chemical Properties

- Physical State** : Solid
- Appearance** : White powder
- Odour** : No characteristic odour
- Density** : 1.28±0.08 at 20 °C.
- pH value** : 6.49± 0.03 at 20.1 °C
- Viscosity** : Not Applicable
- Vapour Pressure** : 1.9077 x 10⁻⁵Pa
- Vapour Density** : Not known
- Melting Point / Freezing Point** : 104.4± 1°C
- Boiling Point** : Not Applicable

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Flash Point	: Not Applicable
Auto Ignition Temp	: Not applicable
Flammable Limits	: Not applicable
Solubility in Water	: 0.027 ± 0.001g/L at 20 °C

10. Stability and Reactivity

Chemical Stability	: Product is stable at ambient conditions of storage
Materials to Avoid	: Data not available
Hazardous Decomposition Product	: Refer to section no. 5
Hazardous Polymerisation	: Not known

11. Toxicological Information

Health Hazards	: Refer to section no. 3
Acute Toxicity	: The product is practically non-toxic. However, it should be treated with the usual care of handling hazardous chemicals.
Route(s) of Entry	
Ingestion	: LD ₅₀ , oral, rat: > 2000 mg/kg body weight of female rat
Skin	: LD ₅₀ , dermal, rat: > 2000 mg/kg body weight
Inhalation	: 4 hour LC ₅₀ , rat: > 2.48 mg/L air

12. Ecological Information

Acute dietary Toxicity in Birds	: In Japanese quail > 5000 ppm.
Acute Toxicity in Fish	: Rainbow trout) LC ₅₀ (96 hrs) 3.2mg/L
Acute Toxicity Honey bees	LC ₅₀ 48 Hrs. > 100µg/bee (contact)

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13. Disposal Considerations

- Waste Treatment Methods** : Keep out of drains, sewers, ditches and waterways. Left-over material that should not be used or chemically reprocessed and should be disposed of in a landfill approved for pesticide disposal. Other possible methods of disposal are controlled incineration with flue gas scrubbing
- Containers** : Emptied containers may retain vapour and product residue. Observe all labeled safeguards until container is cleaned or destroyed.
- Triple or pressure rinse empty containers. Pour rinse water into formulation tank. Store for collection by approved waste disposal service.
- Dispose of as non hazardous industrial waste. Do not re-use containers.
- Disposal of waste and packaging materials must always be in accordance with all applicable local laws / regulations.

14. Transport Information

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Not hazardous under the applicable DOT, ICAO/IATA, IMO, TDG

IMDG Classification

- Proper Shipping Name** : Environmentally Hazardous substance, Solid, n. o. s. (Tebuconazole)
- Hazard class / I D No.** : Class-9.1
- Subsidiary hazard(s)** : -
- Label** : 9
- UN Number** : 3077
- Packing group** : III
- Marine Pollutant** : No

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15. Regulatory Information

- Contains** : Tebuconazole Technical (CAS No. 107534-96-3)
- Regulatory Status** : The product is meant for the production of fungicide formulations which may only be used for the applications that are registered for, in accordance with an officially approved label

16. Other Information

This MSDS is intended for storage and transport safety. It summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

This material should be handled by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.

This MSDS is not intended for product users who should refer to the product label for safety precautions applicable to them.

The information provided in this safety data sheet is believed to be accurate and reliable, but uses of the product may vary and situations unforeseen by Sumitomo Chemical India Limited may exist. The user has to check the validity of the information under local circumstances.