



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO., LTD.

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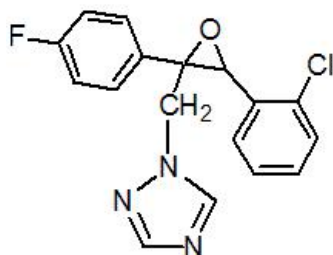
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1. Chemical Product Identification

Product Name: Epoxiconazole TC

Molecular Formula: C₁₇H₁₃ClFN₃O

Structural Formula:



Molecular Weight: 329.76

Chemical Name (IUPAC):

(2RS,3SR)-1-[3-(2-chlorophenyl)-2,3-epoxy-2-(4-fluorophenyl)propyl]-1H-1,2,4-triazole

Form: crystal solid

2. Composition / Information On Ingredients

Composition	CAS No.	Content
Epoxiconazole	135319-73-2	95%
Others	---	5%

3. Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of



inhalation.

Slightly hazardous in case of skin contact (corrosive, permeator). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract.

Skin contact may produce burns.

Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

4. First Aid Measures

Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Ingestion: If swallowed, seek medical advice immediately and show this container or label.

Medical advice: There is no specific antidote available. Treat symptomatically.

5. Fire-Fighting Measures

Extinguishing media

To be used: Water, sand, foam, carbon dioxide, dry powder

Don't use: not applicable

Particular risk: not applicable



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Measures of personal protection: safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

6. Accidental Release Measures

Personal cautions: Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Cleaning methods

EX: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Environmental cautions

EX: prevent the contamination of the floor and of beds of water.

7. Handling And Storage

Precautions: Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapour/spray. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

Storage: Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place.

8. Exposure Controls / Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:



TWA: 10 (ppm) from OSHA (PEL)

TWA: 30 (mg/m³) from OSHA

Consult local authorities for acceptable exposure limits.

9. Physical And Chemical Properties

Appearance: Colourless crystal solid

Density: 1.384(25°C)

Melting point : 136.2°C

Solubility (in water): 6.63(20°C , mg/l)

Soluble in acetone: 140000 mg/L,

Octanol-water partition coefficient: Log P: at pH 7, 20°C.

10. Stability And Reactivity

Chemical stability: Stable under normal use and storage conditions.

Conditions to avoid: Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight

Incompatibility with other materials: Strong acids, strong bases, strong oxidising agents

Hazardous decomposition products: Oxides of carbon, nitrogen and other toxic fumes.

Hazardous polymerization: Hazardous polymerisation is not possible.

11. Toxicological Information

Acute toxicity: Acute oral LD₅₀ for rat: 3160 a.i.mg/kg.

Acute dermal LD₅₀ for rat: >2000 a.i.mg/kg.

Inhalation LC₅₀ (4 h) for rat: >5.3 a.i. mg/L.

Skin irritation: Non- irritating to skin (rabbits).

Eye irritation: Non- irritating to eyes (rabbits).

Skin sensitization: Not a skin sensitiser (guinea pigs).

12. Ecological And Ecotoxicological Information

Effect on birds: low toxicity to birds, acute oral LD₅₀ for Bobwhites quail is >2000 a.i.mg/kg.

Effect on fish: moderate toxicity to fish, acute 96 hour LC₅₀ for Rainbow trout is 3.14 a.i.mg/L.



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Effect on aquatic invertebrates: moderate toxicity to aquatic invertebrates, acute 48 hour EC_{50} for *Daphnia magna* is 8.69 a.i.mg/L.

Effect on algae: moderate toxicity to algae, acute 72 hour EC_{50} for *Pseudokirchneriella subcapitata* is 1.19 a.i.mg/L.

Effect on honeybees: low-moderate toxicity to honeybees, contact acute 48 hour LD_{50} is >100 a.i.µg/bee, oral acute 48 hour LD_{50} is >83 a.i.µg/bee.

Effect on earthworms: moderate toxicity to earthworms, acute 14 day LC_{50} for *Eisenia foetida* is >500 a.i.mg/kg.

13. Disposal Considerations

Disposal of product and contaminated packaging: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Choose the place where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Empty remaining contents. Triple rinse the containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

14. Transport Information

Not applicable

15. Regulatory Information

Not applicable

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. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their



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