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MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO., LTD.

ADD: NO.52 PUCHANG ROAD, PUZHOU INDUSTRIAL PARK, LONGWAN DISTRICT, WENZHOU ZHEJIANG P.R. CHINA

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1. Chemical Product Identification

Product Name: Difenoconazole 250 g/L EC

Molecular Formula: C₁₉H₁₇Cl₂N₃O₃

Structural Formula:

Molecular Weight: 406.26 Chemical Name (IUPAC):

3-chloro-4-[(2RS,4RS;2RS,4SR)-4-methyl-2-(1H-1,2,4-triazol-1-ylmethyl)-1,3-dioxolan-2-yl]

phenyl 4-chlorophenyl ether

Form: EC

2. Composition / Information On Ingredients

Composition	CAS No.	Content
Difenoconazole	119446-68-3	250 g/L
Others		Up to 1L

3. Hazards Identification

Harmful if swallowed or in contact with skin. Wear protective gloves/ protective clothing Harmful if inhaled. May cause respiratory irritation. Harmful to aquatic life, avoid release to



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the environment. Wash hands and container with soap and lots of water. Dispose of contents/container to an approved waste disposal plant. Keep out of reach of children.

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

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

Handling: do not apply to humans, their clothing, or bedding. Do not contaminate food or use on household tanks.

Storage: Store in a cool, dry place.



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8. Exposure Controls / Personal Protection

Personal protective equipment

Respiratory protection: approved respirator

Protective gloves: rubber gloves

Eye protection: goggles

Industrial hygiene: not applicable

9. Physical And Chemical Properties

Appearance: Yellowish-brown transparent liquid

Water: ≤0.5%

pH: 4.0-7.0

Emulsion stability (Dilute 200 times): Qualified

Hot storage stability (54±2 °C 14 days): Qualified

Hot storage stability (54±2°C,7 days): Qualified

10. Stability And Reactivity

Chemical stability: Stable under normal use and storage conditions.

Conditions to avoid: None know.

Incompatibility with other materials: None know.

Hazardous decomposition products: Can decompose at high temperatures forming toxic

gases.

Hazardous polymerization: Will not occur.

11. Toxicological Information

Oral: Acute oral LD₅₀ for rats: 1453 a.i. mg/kg

Dermal: Acute dermal LD₅₀ for rats: >2010 a.i.mg/kg

Inhalation: Acute inhalation LC_{50} for rats: 3.3 a.i.mg/l

Skin irritation: Slightly irritating to skin(rabbits) Eye irritation: Slightly irritating to eyes (rabbits)

Skin sensitization: Not a sensitizer to Guinea Pig

12. Ecological And Ecotoxicological Information



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Birds:

Acute LD₅₀ for Bobwhite quail is >2150 a.i.mg/kg, for Japanese quail is >2000 a.i.mg/kg

Fish:

Acute 96h LC₅₀ for Bluegill sunfish is 1.2 a.i.mg/L, for Rainbow trout is 0.81 a.i.mg/l, for

Sheepshead minnows is 0.82 a.i.mg/l

Aquatic invertebrates:

Acute 48h EC₅₀ for Daphnia magna is 0.77 a.i. mg/L

Honeybees:

Oral acute 48h LD₅₀ is >100 a.i.µg/bee; Contact acute 48h LD₅₀ is >177 a.i.µg/bee

Earthworms:

Acute 14 day LC₅₀ is >610 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





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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 own MSDS.