

COCREATE GLOBAL TECHNOLOGIES PRIVATE LIMITED

U21009KA2023PTC179006

Registered address: FFK Towers, #445, 2nd Floor, 17th Cross Road, Sector 4, HSR Layout, Bangalore, Bangalore South, Karnataka - 560102, India.

Email: info@scimplify.com

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SAFETY DATA SHEET

Difenoconazole Technical

1. Product Identification

- **Product Name:** Difenoconazole Technical
- **Chemical Name:** 1-[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole
- **CAS Number:** 119446-68-3
- **Chemical Formula:** C₁₉H₁₇Cl₂N₃O₃
- **Intended Use:** Broad-spectrum fungicide used in agriculture to control fungal diseases on crops
- **Manufacturer/Supplier:** Cocreate Global Technologies Private Limited

2. Hazard Identification

- **GHS Classification:**
 - Acute Oral Toxicity: Category 4
 - Eye Irritation: Category 2A
 - Carcinogenicity: Category 2
 - Hazardous to the Aquatic Environment, Acute: Category 1
 - Hazardous to the Aquatic Environment, Chronic: Category 1
- **Signal Word:** Warning
- **Hazard Statements:**
 - H302: Harmful if swallowed
 - H319: Causes serious eye irritation
 - H351: Suspected of causing cancer

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- H400: Very toxic to aquatic life
 - H410: Very toxic to aquatic life with long-lasting effects
 - **Precautionary Statements:**
 - P273: Avoid release to the environment
 - P280: Wear protective gloves, clothing, and eye protection
 - P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes
 - P301 + P312: IF SWALLOWED: Call a poison center or doctor if feeling unwell
 - P501: Dispose of contents/container according to local regulations
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3. Composition and Information on Ingredients

- **Active Ingredient:** Difenoconazole ($\geq 95\%$ purity)
 - **Inert Ingredients:** $\leq 5\%$ proprietary formulation components
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4. First-Aid Measures

- **Inhalation:** Move the person to fresh air. Seek medical attention if symptoms persist.
 - **Skin Contact:** Wash thoroughly with soap and water. Remove contaminated clothing. Seek medical advice if irritation develops.
 - **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if easy to do. Seek medical attention if irritation persists.
 - **Ingestion:** Rinse mouth. Do not induce vomiting unless instructed by medical personnel. Call a doctor if feeling unwell.
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5. Fire-Fighting Measures

- **Extinguishing Media:** Water spray, foam, dry chemical, or carbon dioxide
 - **Specific Hazards:** May produce toxic fumes such as carbon monoxide, carbon dioxide, and nitrogen oxides during combustion
 - **Protective Equipment:** Use self-contained breathing apparatus and full protective clothing
 - **Fire Hazard Characteristics:** Non-flammable but may produce harmful vapors when exposed to heat
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6. Accidental Release Measures

- **Personal Precautions:** Use personal protective equipment (PPE). Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation.
 - **Environmental Precautions:** Prevent contamination of water bodies, soil, and drains.
 - **Methods for Cleanup:** Contain spill. Sweep or vacuum up material and place in a properly labeled container for disposal. Dispose according to local environmental regulations.
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7. Handling and Storage

- **Handling Instructions:**
 - Avoid contact with eyes, skin, and clothing
 - Do not breathe dust or vapor
 - Wear suitable PPE during handling
- **Storage Conditions:**
 - Store in a cool, dry, and well-ventilated area
 - Protect from direct sunlight, heat, and moisture
 - Keep container tightly sealed when not in use
- **Shelf Life:** 2 years under recommended storage conditions

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8. Exposure Controls and Personal Protection

- **Occupational Exposure Limits:** No specific exposure limits established
- **Engineering Controls:** Ensure adequate ventilation during use
- **Personal Protective Equipment (PPE):**
 - **Respiratory Protection:** Use NIOSH-approved dust mask
 - **Eye Protection:** Chemical safety goggles
 - **Hand Protection:** Chemical-resistant gloves (nitrile, rubber)
 - **Skin Protection:** Long-sleeved clothing and protective shoes

9. Physical and Chemical Properties

- **Appearance:** Off-white crystalline powder
 - **Odor:** Odorless
 - **Molecular Weight:** 406.27 g/mol
 - **Melting Point:** 76–77°C
 - **Boiling Point:** Not applicable (decomposes before boiling)
 - **Solubility in Water:** 0.015 mg/L at 20°C
 - **Density:** 1.38 g/cm³
 - **Partition Coefficient (log Pow):** 4.36
 - **Vapor Pressure:** 2.7 x 10⁻⁹ mmHg at 25°C
 - **pH (1% solution):** 6.5–7.5
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10. Stability and Reactivity

- **Chemical Stability:** Stable under recommended storage conditions
 - **Conditions to Avoid:** Extreme temperatures, direct sunlight, moisture
 - **Incompatible Materials:** Strong oxidizing agents, strong acids, and bases
 - **Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, nitrogen oxides
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11. Toxicological Information

- **Acute Toxicity:**
 - Oral LD50 (Rat): 1450 mg/kg
 - Dermal LD50 (Rat): >2000 mg/kg
 - Inhalation LC50 (Rat, 4h): >5 mg/L
 - **Skin Corrosion/Irritation:** May cause mild skin irritation
 - **Eye Damage/Irritation:** Causes serious eye irritation
 - **Sensitization:** Not a sensitizer in guinea pigs
 - **Carcinogenicity:** Classified as Category 2 (suspected human carcinogen)
 - **Mutagenicity:** No mutagenic effects observed in animal studies
 - **Reproductive Toxicity:** No adverse reproductive effects observed
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12. Ecological Information

- **Aquatic Toxicity:**
 - Fish (96h LC50 - Rainbow trout): 0.16 mg/L
 - Daphnia Magna (48h EC50): 0.1 mg/L
 - Algae (72h EC50): 0.02 mg/L
- **Bioaccumulation Potential:** Moderate (log Kow > 3)

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- **Mobility in Soil:** Low mobility due to strong adsorption to soil particles
 - **Persistence and Degradability:** Slowly biodegradable; long half-life in soil
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13. Disposal Considerations

- **Product Disposal:** Dispose of in accordance with local, regional, and national environmental regulations
 - **Container Disposal:** Triple rinse empty containers and puncture them before disposal
 - **Environmental Impact:** Avoid release into water bodies and soil
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14. Transport Information

- **UN Number:** UN3077
 - **Proper Shipping Name:** Environmentally hazardous substance, solid, n.o.s. (Difenoconazole)
 - **Hazard Class:** 9 (Miscellaneous dangerous substances and articles)
 - **Packing Group:** III
 - **Marine Pollutant:** Yes
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15. Regulatory Information

- **U.S. EPA Status:** Registered pesticide product
 - **EU Classification:** Very toxic to aquatic life, suspected carcinogen
 - **International Regulations:**
 - Compliant with REACH (EU)
 - Registered under the FAO International Code of Conduct on Pesticide Management
 - **Label Requirements:** GHS-compliant labeling
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16. Other Information

- **Disclaimer:** Information provided here is accurate to the best of our knowledge. It is intended only as a guideline for safe handling, use, processing, storage, transportation, and disposal. The user is responsible for ensuring compliance with local regulations.