



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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1. PRODUCT IDENTIFICATION

Product Name: DIFENOCONAZOLE 95%TECH

Chemical Name: 1H-1,2,4-Triazole,

1-[[[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-yl]methyl]-

Chemical Class: Triazole Fungicide

CAS No.: 119446-68-3

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Difenoconazole 95%Tech	Not Established	Not Established	8 mg/m ³ TWA ***	No

3. HAZARDS IDENTIFICATION

Symptoms of Acute Exposure

Causes mild eye and skin irritation.

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases. Physical Properties

Appearance: Light yellow powder

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you, a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye, a poison control center or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes., a poison control center or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. a poison control center or doctor for further treatment advice.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion. In Case of Fire Use dry chemical, foam or CO₂ extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles.

Skin Contact: Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White powder

Acetone insoluble: 0.2%

Alkalinity(As NaOH): 0.1%

Moisture: 0.3%

Melting point: not applicant

Boiling point: not applicant

10. STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None known.

Materials to Avoid: None known.

Hazardous Decomposition Products: Can decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion: Practically Non-Toxic Oral (LD50 Rat) > 5,000 mg/kg body weight

Dermal: Slightly Toxic Dermal (LD50Rabbit) : > 2,000 mg/kg body weight

Inhalation: Slightly Toxic Inhalation (LC50 Rat) : > 2.56 mg/l air - 4 hours

Eye Contact: Minimally Irritating (Rabbit)

Reproductive/Developmental Effects Difenoconazole: None observed.

Chronic/Subchronic Toxicity Studies Difenoconazole: Kidney and liver effects at high doses (> 5,000 ppm; rats); Eye effects in dogs at high dose levels.

Carcinogenicity Difenoconazole: 2/70 male rats in the highest dose group (20,000 ppm) were found to have squamous cell carcinoma in the non-glandular stomach. Effect did not occur in female rats or in mice and not considered relevant to humans. Increase in brain tumors (mice) at doses exceeding the Maximum Tolerated Dose (MTD) (>2,500 ppm).

Target Organs Active Ingredients Difenoconazole: Brain, liver, kidney, gastrointestinal tract

12. ECOLOGICAL INFORMATION

Summary of Effects Difenoconazole: Highly toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Difenoconazole: Bees LC50/EC50 > 100 ug/bee

Invertebrates (Water Flea) LC50/EC50 0.77 ppm

Fish (Trout) LC50/EC50 1.1 ppm

Fish (Bluegill) LC50/EC50 1.2 ppm

Birds (8-day dietary - Bobwhite Quail) LC50/EC50 4,760 ppm

Birds (8-day dietary - Mallard Duck) LC50/EC50 > 5,000 ppm

Eco-Chronic Toxicity

Difenoconazole: Fish (Fathead minnow) Early Life Stage MATC > 0.0087 and < 0.019 mg/L

Invertebrate (Daphnia Magna) Life Cycle MATC > 0.0056 and < 0.013 mg/L

Mallard Reproduction NOEC 25 ppm

Bobwhite Reproduction NOEC 125 ppm

The information presented here is for the active ingredient, difenoconazole.

Stable in soil and water. Low to moderate mobility in soil. Sinks in water (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

UN number Not applicable

Hazchem code Not applicable

Marine pollutant No

Packing group Not applicable

EPG Not applicable

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Not Applicable

California Proposition 65 Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ) None

RCRA Hazardous Waste Classification (40 CFR 261) Not Applicable

TSCA Status Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings		Minimal
Health:	1	Health:	1	Slight
Flammability:	1	Flammability:	1	Moderate
Instability:	0	Reactivity:	0	Serious

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS.