



MATERIAL SAFETY DATA SHEET

STRIDER™ Turf and Ornamental Fungicide

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Please read the entire document. This Material Safety Data Sheet contains important environmental, health and toxicology information for your employees, and anyone who will use, transport, store, dispose of or handle this product. Please make sure this information is given to them as required by Federal and State law. It also contains information to help meet community right to know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information contained herein must be incorporated in your MSDS.

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: STRIDER™ Turf and Ornamental Fungicide
EPA REGISTRATION NUMBER(S): 1001-84
CHEMICAL NAME: 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole
SYNONYM: Propiconazole
GENERAL USE: Turf and ornamental fungicide

COMPANY

Cleary Chemicals LLC
 178 Ridge Road, Suite A
 Dayton, New Jersey 08810

EMERGENCY TELEPHONE NUMBERS

CLEARY CHEMICALS LLC M-F 9-5 EST (800) 524-1662 OR (732) 329-8399	PROSAR: (800) 324-7598 CHEMTREC 24 HOUR: (800) 424-9300
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SECTION 2: COMPOSITION, INFORMATION ON INGREDIENTS

Active Ingredient(s)/ Hazardous Inert Ingredient(s)	% by Wt.	CAS#	ACGIH TLV	OSHA PEL
Propiconazole	14.3	60207-90-1	NE	NE
Other Ingredients*	85.7	Proprietary		

*All ingredients may not be listed. Ingredients not listed do not meet the reporting requirements of the OSHA Hazard Communication Standard (HCS) as specified in 29 CFR 1910.1200.

SECTION 3: HAZARDS IDENTIFICATION

WARNING. Can cause substantial but temporary eye irritation. May be harmful if swallowed, inhaled or absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor or spray mist. Keep out of reach of children.

POTENTIAL HEALTH EFFECTS:

Eye: Substantially irritating to the eyes. Degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

Skin: Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Inhalation: Slightly irritating to respiratory tract.

Ingestion: May be harmful if swallowed.

SECTION 4: FIRST AID MEASURES

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

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

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

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

Note To Physician: No specific antidote, treat patient symptomatically. Eye contact may require specialized ophthalmologic attention. If ingested, induce emesis or lavage stomach carefully to avoid aspiration.

For additional information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378 or poison Control Center for assistance.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point (Method): >105°C (>221°F) (PMA-4)

Flammable Limits (vol % in air): Unknown

Suitable Extinguishing Media: Use carbon dioxide, dry chemical, foam or water spray.

Special Fire Fighting Procedures: Wear full fire fighting turn-out gear (Bunker gear). Keep unnecessary people away. Control run-off water, by diking area of fire to prevent run-off. Decontaminate emergency personnel with soap and water before leaving the fire area. Avoid breathing dusts, vapors and fumes from burning materials.

Unusual Fire and Explosion Hazards: This material can burn in fire releasing irritating and toxic gases due to thermal decomposition or combustion.

Hazardous Combustion Products: Unknown

SECTION 6: ACCIDENTAL RELEASE MEASURES

In case materials are released, contact emergency response personnel. Clean up spills immediately, observing precautions in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Small Spill: Absorb small spills with sand, vermiculite or other inert absorbent. Place contaminated material in appropriate container for disposal.

Large Spill: Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow absorbed material to solidify and scrape up for disposal. Clean up wash liquid with additional absorbent and place in a disposable container. After clean up, flush contaminated area thoroughly with water. This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

SECTION 7: HANDLING AND STORAGE

Keep out of reach of children. Use only in a well-ventilated area. Do not reuse this container. Prevent eating, drinking, tobacco use and cosmetic application in areas where there is a potential for exposure to the material.

Handling Precautions: Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or spray mist. Clean applicator and measuring equipment before using with other products and dispose of wash water where it will not contaminate crops, grazing, rivers and dams. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and wash thoroughly after handling.

Storage Precautions: Store in the original container and keep closed. Store product in a cool, dry and well-ventilated place. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits (8 hour TWA): (Refer to Section 3)

Engineering Controls: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Refer to the product label for additional information regarding application of this product.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Personal Protective Equipment:

Eyes and Face: For splash, mist or spray exposure, wear chemical protective goggles or a full face shield.

Protective Clothing: Long-sleeved shirt and long pants, shoes plus socks, and a chemical resistant apron when cleaning equipment, mixing, or loading.

Gloves: Wear chemical-resistant gloves such as barrier laminate, butyl rubber (≥ 14 mils), nitrile rubber (≥ 14 mils), neoprene rubber (≥ 14 mils), polyvinyl chloride (PVC) (≥ 14 mils), or viton (≥ 14 mils).

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Respiratory Protection: Ensure good ventilation. For maximum protection, wear a supplied air, full-face piece respirator, air lined hood, or full-face piece self-contained breathing apparatus.

User Safety Recommendations

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately, if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Amber liquid
Odor:	Slight solvent odor
Molecular Formula (technical):	$C_{15}H_{17}Cl_2N_3O_2$
pH:	5.59
Bulk Density:	1.086 g/ml (9.06 lbs/gallon)
Solubility in Water:	Forms emulsion in water.

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable, however may decompose if heated.

Incompatible Materials: Alkaline and acidic conditions and materials, oxidizing materials.

Conditions to Avoid: Avoid temperatures above 150°F and below 20°F.

Hazardous Decomposition: Unknown.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral Toxicity: Oral LD50 (rat): $>3,000$ mg/kg

Acute Dermal Toxicity: Dermal LD50 (rat): $>5,000$ mg/kg

Acute Inhalation Toxicity: Inhalation LC50 (rat): >2.02 mg/L (4 hr.)

Eye Irritation: Moderately irritating to the eyes (rabbit)

Skin Irritation: Slightly irritating to the skin (rabbit)

Dermal Sensitization: Skin sensitizer (guinea pig)

Effects Of Acute Exposure: This product has low oral, dermal and inhalation toxicity. This product is substantially irritating to the eyes; the degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

Effects Of Chronic Exposure: In studies with laboratory animals, propiconazole did not cause teratogenicity, neurotoxicity or carcinogenicity in male and female rats and male mice. In laboratory animals that have ingested large doses of propiconazole during their life span, liver enlargement is often noted and an increase

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SECTION 11: TOXICOLOGICAL INFORMATION (continued from page 3)

of neoplastic and non-neoplastic liver cell tumors in male mice at 2500 ppm in the diet was observed. At a dose of 850 ppm in the diet, there was a statistically significant increase in benign adenomas but no increase in carcinomas. In studies of rats, developmental toxicity in the form of cleft palate occurred. In studies of rabbits, no adverse development effects were identified.

An overall absence of genotoxicity has been demonstrated in tests of mutagenicity, DNA damage and chromosome aberrations.

Medical Conditions Aggravated By Exposure: None known.

Carcinogenicity: IARC: Not listed; NTP: Not listed; OSHA: Not listed; OTHER: (ACGIH) Not listed

Mutagenic Data: No evidence of effects during *in vivo* or *in vitro* studies.

SECTION 12: ECOLOGICAL INFORMATION

Note: The information presented in this section applies to the active ingredient, propiconazole.

Environmental Hazards: This pesticide is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water.

Environmental Properties: Propiconazole has low mobility and is not persistent in soil, has low bioaccumulation potential, and is stable in water (sinks in water after 24 hours).

SECTION 13: DISPOSAL CONSIDERATIONS

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

SECTION 14: TRANSPORT INFORMATION

Dot Hazard Class Or Division: Not regulated **U.S. Dot Proper Shipping Name:** NA **UN NUMBER:** NA

Dot Packing Group: NA **Reportable Quantity:** None **Marine Pollutant:** Not Listed

U.S. Surface Freight Class: Agricultural Fungicides, Liquid, NOIBN

SECTION 15: REGULATORY INFORMATION

FIFRA: All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

CERCLA RQ: None

SARA Title III – Section 302 Extremely Hazardous Substances: Not listed

SARA Title III – Section 311 Hazard Categories: Acute health hazard

SARA Title III – Section 312 Threshold Planning Quantity: The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

SARA Title III – Section 313 Reportable Ingredients: Propiconazole (60207-90-1)

California Prop 65 Status: Not listed

NFPA Ratings: Flamability: 1 Reactivity: 0 Health: 2

SECTION 16: OTHER INFORMATION

Please note: Cleary Chemicals, LLC. believes that the information and recommendations contained herein are accurate as of the date hereof. The information provided herein applies only to the specific product designated and may not be valid where said product is used in combination with any other material or in any process. It is the user's responsibility to determine the suitability of the information for their purposes. No warranty of fitness for any particular purpose, warranty of merchantability, or any other warranty, expressed or implied, is made concerning the information provided.

Reason for issue: New Product

Effective date: 10/30/2008

Prepared by: R. Fletcher

Replaces: