1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **LESCO® SPECTATOR™ Turf and Ornamental Fungicide**
EPA Reg. No.: 228-633
Synonyms: Propiconazole: 1-[[2,(2,4-dichloropheyny)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4-triazole
Product Type: Fungicide

Company Name: Nufarm Americas Inc.
150 Harvester Drive, Suite 200
Burr Ridge, IL 60527

Telephone Numbers: **For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night: 1-800-424-9300**
For Medical Emergencies Only, Call 1-877-325-1840

Date of Issue: December 1, 2009 **Supersedes:** New
Sections Revised: New

2. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance and Odor: Clear, amber colored liquid with a typical aromatic odor.
Warning Statements: Warning. Keep out of reach of children. Causes substantial but temporary eye injury. Causes skin irritation. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Combustible; flash point 148.3°F (64.6°C).

Potential Health Effects:
Likely Routes of Exposure: Inhalation, eye and skin contact.
Eye Contact: Causes substantial but temporary eye injury. Vapors and mist may cause irritation.
Skin Contact: Minimally toxic and moderately irritating based on toxicity studies.
Ingestion: May be harmful if swallowed. The petroleum hydrocarbon component, if aspirated into the respiratory system during ingestion or vomiting may cause mild or severe pulmonary injury, possibly progressing to death.
Inhalation: Low inhalation toxicity. Overexposure to petroleum hydrocarbon component may cause irritation to respiratory tract, headaches, anaesthesia, drowsiness, unconsciousness and other central nervous system effects, possibly including death.
Medical Conditions Aggravated by Exposure: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

See Section 11: TOXICOLOGICAL INFORMATION for more information.

Potential Environmental Effects:
This product is toxic to fish.

See Section 12: ECOLOGICAL INFORMATION for more information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Propiconazole	60207-90-1	41.8
Other Ingredients Including:		58.2
Petroleum Hydrocarbon (may contain)		
Naphthalene	91-20-3	

4. FIRST AID MEASURES

If in Eyes: Hold eye open and rinse slowly and gently with water for 15 to 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 on Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. 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.
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.
Note to Physician: There is no specific antidote for this product. Induce emesis or lavage stomach, taking care to avoid aspiration of stomach contents into lungs. Give saline laxative and supportive therapy. Contains petroleum distillate, vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

Flash Point: 148.3°F (64.6°C) Pensky-Martens
Autoignition Temperature: Not determined **Flammability Limits:** Not determined

Extinguishing Media: Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.
Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.
Unusual Fire and Explosion Hazards: Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Containers will burst from internal pressure under extreme fire conditions. If water is used to fight fire or cool containers, dike to prevent runoff contamination of municipal sewers and waterways.
Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

National Fire Protection Association (NFPA) Hazard Rating:
Rating for this product: Health: 2 **Flammability:** 2 **Reactivity:** 0
Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.
Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.
Methods for Cleanup and Disposal: Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.
Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Handling:
Do not get in eyes, on skin, or on clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/Personal Protective Equipment (PPE) immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Storage:
Store in original container in a secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not contaminate water, food, or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:
Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:
Eye/Face Protection: To avoid contact with eyes, wear face shield, goggles or safety glasses with front, brow and temple protection. An emergency eyewash or water supply should be readily accessible to the work area.
Skin Protection: To avoid contact with skin, applicators and other handlers must wear coveralls over short-sleeved shirt and long pants, chemical-resistant footwear plus socks, chemical-resistant gloves and chemical-resistant headgear for overhead exposure. Wear a chemical-resistant apron when mixing, loading or cleaning equipment.. An emergency shower or water supply should be readily accessible to the work area.
Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.
General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

	OSHA		ACGIH		
Component	TWA	STEL	TWA	STEL	Unit
Propiconazole					
Naphthalene	10	NE	10 (Skin)	15 (Skin)	ppm

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear, amber colored liquid with an typical aromatic odor.

Boiling Point:	Not determined	**Solubility in Water:**	Emulsifiable
Density:	8.77 pounds/gallon	**Specific Gravity:**	1.053 @ 20°C
Evaporation Rate:	Not determined	**Vapor Density:**	Not determined
Freezing Point:	Not determined	**Vapor Pressure:**	Not determined
pH:	5 to 6 (1% solution)	**Viscosity:**	17.436 cst @ 20°C

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Chemical Stability: This material is stable under normal handling and storage conditions.
Conditions to Avoid: Avoid temperatures near or above flash point 148.3°F (64.6°C).
Incompatible Materials: Strong oxidizing agents: bases and acids.
Hazardous Decomposition Products: Under fire conditions may produce gases such as hydrogen chloride and oxides of carbon and nitrogen.
Hazardous Reactions: Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological Data:
Data from laboratory studies on this product are summarized below:
Oral: Rat LD_{50}: 1,030 mg/kg (female) (estimated based on mortalities for doses tested)
Dermal: Rat LD_{50}: >5,000 mg/kg
Inhalation: Rat 4-hr LC_{50}: >2.04 mg/L
Eye Irritation: Rabbit: Moderately irritating
Skin Irritation: Rabbit: Moderately irritating
Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.

Subchronic (Target Organ) Effects: Repeated overexposure to propiconazole may cause effects to liver.
Carcinogenicity / Chronic Health Effects: Propiconazole has been shown to cause an increased incidence of benign liver tumors in male mice at extremely high doses. No treatment-related tumors were seen in female mice in the same study or in a separate rat study. The hydrocarbon component may contain naphthalene, which is listed by IARC as a class 2B and the U.S. National Toxicology Program as reasonably anticipated to be a human carcinogen.
Reproductive Toxicity: Propiconazole did not demonstrate reproductive effects in animal studies.
Developmental Toxicity: Animal tests with propiconazole have not demonstrated developmental effects.
Genotoxicity: Studies indicate that propiconazole did not produce genetic damage in mammalian or bacterial cell cultures or in animal studies.

Assessment Carcinogenicity:
This product contains substances that are considered to be probable or suspected human carcinogens as follows:

	Regulatory Agency Listing As Carcinogen			
Component	**ACGIH**	**IARC**	**NTP**	**OSHA**
Naphthalene	No	2B	Yes*	No

*Reasonably anticipated to be a human carcinogen

See Section 2: HAZARDS IDENTIFICATION for more information.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Data on Propiconazole Technical:

96-hour LC_{50} Bluegill:	1.3 ppm	Bobwhite Quail Oral LD_{50}:	2,825 mg/kg
96-hour LC_{50} Rainbow Trout:	0.85 ppm	Bobwhite Quail 8-day Dietary LC_{50}:	>5,620 ppm
48-hour LC_{50} Daphnia magna:	4.8 ppm	Mallard Duck Oral LD_{50}:	2,510 mg/kg
96-hour LC_{50} Mysid:	0.51 ppm	Mallard Duck 8-day Dietary LC_{50}:	>5,620 ppm
48-hour Honey Bee LD_{50}:	>25 µg/bee		

Environmental Fate:

Propiconazole is persistent and relatively immobile in most soil and aqueous environments. Propiconazole degradation in the aquatic environment appears to be dependent solely on aqueous photolysis. In the soil, propiconazole dissipation appears to be dependent on binding to soil organic matter content. The average half-life in soils ranges from months to a year

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Pesticide wastes may be acutely hazardous. Improper disposal is a violation of Federal Law. Pesticide, mixtures, or equipment rinse water that cannot be chemically reprocessed must be disposed of according to applicable Federal, state or local procedures. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling and Disposal:

Nonrefillable Containers 5 Gallons or Less: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

DOT

< 265 gallons per completed package

Non Regulated

≥ 265 gallons per completed package

UN 3082, RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (NAPHTHALENE), 9, III

IMDG

UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (PROPICONAZOLE), 9, III, MARINE POLLUTANT

IATA

Non Regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations:

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:
Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):
Immediate and Delayed

Section 313 Toxic Chemical(s):
Propiconazole (CAS No. 60207-90-1) 41.8% by weight in product
Naphthalene (CAS No. 91-20-3), < 4.3% by weight in product

Reportable Quantity (RQ) under U.S. CERCLA:
Naphthalene (CAS No. 91-20-3) 100 pounds

RCRA Waste Code:
Naphthalene (CAS No. 91-20-3) U165

State Information:
Other state regulations may apply. Check individual state requirements.

California Proposition 65: WARNING. This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

16. OTHER INFORMATION

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

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