

McHUGH'S LANDSCAPING

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DATE: 7/02/19

PESTICIDE NOTIFICATION

CUSTOMER: DELRAN BOE

ADDRESS: 52 HARTFORD RD. , DELRAN, NJ 08075

TREATED AREAS: DHS FOOTBALL, SOCCER & HOCKEY FIELDS ONLY.

DATE & TIME OF APPLICATION: WEDNESDAY, 7/10/19, 7:00 AM TO 12:00 PM
FIELDS MUST BE CLOSED.

RE-ENTRY DATE & TIME: THURSDAY, 7/11/19, 7:00 AM

MATERIALS USED: 'DISMISS TURF HERBICIDE'
EPA# 279-3295

'SPECTATOR FUNGICIDE'
EPA# 62719-346-10404

JAMES J. MCHUGH, (609) 352-5755
MCHUGH'S LANDSCAPING

PLEASE RETAIN FOR YOUR RECORDS.

SAFETY DATA SHEET
DISMISS® TURF HERBICIDE

SDS #: 6304-A
Revision date: 2015-04-10
Format: NA
Version 1.01



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name DISMISS® TURF HERBICIDE

Other means of identification

Product Code(s) 6304-A

Synonyms SULFENTRAZONE (FMC 97285):
2',4'-dichloro-5'-(4-difluoromethyl-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl)
methanesulfonanilide; N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-
1,2,4-triazol-1-yl]phenyl] methanesulfonamide

Active Ingredient(s) Sulfentrazone,

Chemical Family Triazolinones

Recommended use of the chemical and restrictions on use

Recommended Use: Herbicide

Restrictions on Use: Use as recommended by the label

Manufacturer Address

FMC Corporation
1735 Market Street
Philadelphia, PA 19103
(215) 299-6000 (General Information)
msdsinfo@fmc.com (E-Mail General Information)

Emergency telephone number

For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)
Medical Emergencies:
1 800 / 331-3148 (PROSAR - U.S.A. & Canada)
1 651 / 632-6793 (PROSAR - All Other Countries - Collect)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

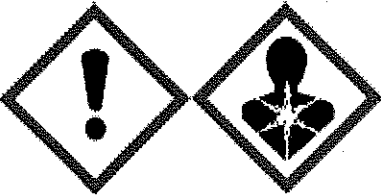
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Specific target organ toxicity (repeated exposure)	Category 2

GHS Label elements, including precautionary statements**EMERGENCY OVERVIEW**

Warning

Hazard Statements
H332 - Harmful if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure


Precautionary Statements - Prevention

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

P314 - Get medical advice/ attention if you feel unwell

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312 - Call a POISON CENTER or doctor if you feel unwell

Precautionary Statements - Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Triazolinones.

Chemical name	CAS-No	Weight %
Sulfentrazone	122836-35-5	39.7
Propylene glycol	57-55-6	5-10
Toluene	108-88-3	1-5
n-Butanol	71-36-3	1-5

Synonyms are provided in Section 1.

4. FIRST AID MEASURES**Eye Contact**

Hold eyes 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 further treatment advice.

Skin Contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

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

Ingestion 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed None known.

Indication of immediate medical attention and special treatment needed, if necessary Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Carbon dioxide (CO₂). Foam. Dry powder. Water spray.

Specific Hazards Arising from the Chemical

Explosion data

Sensitivity to Mechanical Impact Not sensitive.

Sensitivity to Static Discharge Not sensitive.

Protective equipment and precautions for firefighters Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

Other For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

Environmental Precautions Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.

Methods for Containment Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

Storage Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container.

Incompatible products None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
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Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m ³ STEL: 150 ppm STEL: 560 mg/m ³	Mexico: S* Mexico: TWA 50 ppm Mexico: TWA 188 mg/m ³
n-Butanol 71-36-3	TWA: 20 ppm	TWA: 100 ppm TWA: 300 mg/m ³	IDLH: 1400 ppm Ceiling: 50 ppm Ceiling: 150 mg/m ³	Mexico: S* Mexico: Ceiling 50 ppm Mexico: Ceiling 150 mg/m ³
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Propylene glycol 57-55-6			TWA: 10 mg/m ³ (aerosol only) TWA: 50 ppm (aerosol and vapor) TWA: 155 mg/m ³ (aerosol and vapor)	
Toluene 108-88-3	TWA: 20 ppm	TWA: 50 ppm TWA: 188 mg/m ³ Skin	TWA: 20 ppm	TWA: 50 ppm TWA: 188 mg/m ³ Skin
n-Butanol 71-36-3	TWA: 15 ppm Ceiling: 30 ppm	Ceiling: 50 ppm Ceiling: 152 mg/m ³ Skin	TWA: 20 ppm	TWA: 20 ppm TWA: 60 mg/m ³

Appropriate engineering controls

Engineering measures Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment

Eye/Face Protection If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin and Body Protection Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection Protective gloves

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

General information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Off-white, Liquid
Physical State	Liquid
Color	Off-white
Odor	Low Alcohol
Odor threshold	No information available

pH	5.3-6.0 @ 20 °C
Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	> 94 °C / > 201 °F Tag Closed Cup
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Density	10.0 lb/gal
Specific gravity	1.206 @ 20 °C
Water solubility	Dispersible in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Molecular weight	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical Stability	Stable.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat
Incompatible materials	None known.
Hazardous Decomposition Products	Carbon oxides (COx), Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride, Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral	2084 mg/kg (rat)
LD50 Dermal	> 2000 mg/kg (rabbit)
LC50 Inhalation	> 2.72 mg/L 4 hr (rat)
Serious eye damage/eye irritation	Slightly or non-irritating (rabbit).
Skin corrosion/irritation	Slightly or non-irritating (rabbit).
Sensitization	Non-sensitizing.

Information on toxicological effects

Symptoms	Signs of toxicity in laboratory animals given sulfentrazone included clonic convulsions, ataxia, hypersensitivity to touch, chromorhinorrhea, abdominogenital staining, decreased locomotion, lacrimation, nasal discharge, and squinting eyes.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity Sulfentrazone: Prolonged exposure cause decreased hemoglobin content and hematocrit, and increased spleen weight and splenic extramedullary hematopoiesis at high doses in animal studies.

Mutagenicity Sulfentrazone: Not genotoxic in laboratory studies.

Carcinogenicity Sulfentrazone: No evidence of carcinogenicity from animal studies.

Neurological effects Sulfentrazone: Clinical signs of neurotoxicity in laboratory animals was observed at high dose levels.

Reproductive toxicity Sulfentrazone: No toxicity to reproduction in animal studies.

Developmental toxicity Sulfentrazone: Fetal weight decreased; delayed skeletal ossification observed at maternally non-toxic doses are reversible effects and a dose-response is established; malformations observed in fetuses at maternally toxic doses and consistent with the mode of action for protoporphyrongen oxidase inhibitors. Developmental toxicity testing and results were generated for sulfentrazone with toluene present as an impurity.

STOT - single exposure Not classified.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure. See listed target organs below.

Target organ effects Sulfentrazone: Hematopoietic system.

Neurological effects Sulfentrazone: Clinical signs of neurotoxicity in laboratory animals was observed at high dose levels.

Aspiration hazard No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
Toluene 108-88-3		Group 3		

12. ECOLOGICAL INFORMATION

Ecotoxicity

Sulfentrazone (122836-35-5)				
Active Ingredient(s)	Duration	Species	Value	Units
Sulfentrazone	72 h EC50	Algae	32.8	mg/L
	48 h EC50	Crustacea	60.4	mg/L
	96 h LC50	Fish	94	mg/L
	21 d NOEC	Fish	5.9	mg/L
	21 d NOEC	Crustacea	0.51	mg/L

Persistence and degradability Sulfentrazone: Persistent. Does not readily hydrolyze.

Bioaccumulation Sulfentrazone: The substance does not have a potential for bioconcentration.

Mobility Sulfentrazone: Mobile, Has potential to reach ground water.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

Contaminated Packaging Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

14. TRANSPORT INFORMATION

DOT This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185.

TDG Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

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UN/ID no UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
Packing Group III
Marine Pollutant Sulfentrazone.
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Sulfentrazone), 9, III, Marine Pollutant

ICAO/IATA

UN/ID no UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
Packing Group III
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Sulfentrazone), 9, III

IMDG/IMO

UN/ID no UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
Packing Group III
EmS No. F-A, S-F
Marine Pollutant Sulfentrazone
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Sulfentrazone), 9, III, Marine Pollutant

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
Toluene - 108-88-3	108-88-3	1-5	1.0
n-Butanol - 71-36-3	71-36-3	1-5	1.0

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic health hazard Yes
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Toluene 108-88-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

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n-Butanol 71-36-3	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
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FIFRA Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

*Causes moderate eye irritation. Harmful if inhaled, swallowed, or absorbed through the skin.
 This pesticide is toxic to marine/estuarine invertebrates.*

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Prop. 65
Toluene - 108-88-3	Developmental Female Reproductive
Sodium o-phenylphenate - 132-27-4	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Propylene glycol 57-55-6	X		X
Toluene 108-88-3	X	X	X
n-Butanol 71-36-3	X	X	X

International Inventories

Component	TSCA (United States)	DSL (Canada)	EINECS/ELI NCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Propylene glycol 57-55-6 (5-10)	X	X	X	X	X	X	X	X
Toluene 108-88-3 (1-5)	X	X	X	X	X	X	X	X
n-Butanol 71-36-3 (1-5)	X	X	X	X	X	X	X	X

Mexico - Grade

Slight risk, Grade 1

WHMIS Hazard Class

D2B - Toxic materials



16. OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 1	Instability 0	Special Hazards -
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HMS	Health Hazards 1*	Flammability 1	Physical hazard 0	Personal Protection X
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Revision date: 2015-04-10
Revision note (M)SDS sections updated

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Prepared By:

FMC Corporation

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End of Safety Data Sheet

SAFETY DATA SHEET

LESCO Spectator T&O Fungicide



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: LESCO Spectator T&O Fungicide
EPA Reg. No.: 228-633
Product Type: Fungicide

Company Name: Nufarm Americas Inc.
 11901 S. Austin Avenue
 Alsip, IL 60803
 1-800-345-3330

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

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not exactly the same as on the FIFRA label. Certain sections are superseded by federal law governed by EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

2. HAZARDS IDENTIFICATION

PHYSICAL HAZARDS:

Flammable liquid Category 4

HEALTH HAZARDS:

Acute toxicity, oral Category 4
 Skin irritation Category 2
 Eye irritation Category 2A
 Specific target organ toxicity – Repeat exposure Category 2
 Carcinogenicity Category 2

ENVIRONMENTAL HAZARDS:

Hazardous to aquatic environment, acute Category 1
 Hazardous to aquatic environment, chronic Category 1

SIGNAL WORD:

WARNING

HAZARD STATEMENTS:

Combustible liquid. Harmful if swallowed or inhaled. Suspected of causing cancer. Causes skin irritation. Causes serious eye irritation. May cause damage to organs (liver) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS:**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. If exposed or concerned: get medical advice/attention.

Store locked up.

SAFETY DATA SHEET

LESCO Spectator T&O Fungicide

Keep away from flames and hot surfaces. – No smoking. In case of fire: Use dry chemical, carbon dioxide, foam, water spray or fog to extinguish. Store in well-ventilated place. Keep cool.

Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. Dispose of contents/container in accordance with local/regional/national/international regulations.

Wear protective gloves/eye protection/face protection. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Avoid release to the environment.

Collect spillage.

Dispose of contents/container in accordance with state and federal regulations.

See Section 13 and product label for disposal instructions.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	% BY WEIGHT
Propiconazole	60207-90-1	40.5 – 43.5
Solvent naphtha (petroleum), heavy arom.	64742-94-5	42.3 – 45
Naphthalene	91-20-3	<4.5
Pseudocumene (1,2,4-Trimethylbenzene)	95-63-6	<1.0
Other Ingredients	Trade Secret	Trade Secret

Synonyms: Mixture containing Propiconazole: 1-[[2, (2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]methyl]-1H-1,2,4 triazole

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

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 or Clothing: 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. Do not give any liquid to the person. 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.

Inhaled: Move person to fresh air. Get medical attention if symptoms develop.

Most important symptoms/effects, acute and delayed: Eye exposure may cause moderate irritation. Skin exposure may cause moderate irritation.

Indication of immediate medical attention and special treatment if needed, if necessary: None expected.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.

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 oxides of carbon and nitrogen.

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: Avoid creation of dusty conditions. Scrape up and place in appropriate closed container. Wash entire spill area with a detergent slurry, absorb and sweep into container 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 or on clothing or skin. 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. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into 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.

Eye/Face Protection: Not normally required. To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks and shoes. 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:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Propiconazole	NE	NE	NE	NE	
Naphthalene	10	NE	10 skin	NE	ppm
Pseudocumene (1,2,4-Trimethylbenzene)	25	NE	NE	NE	ppm
Other Ingredients	NE	NE	NE	NE	

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES
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Appearance:	Amber liquid
Odor:	No data available
Odor threshold:	No data available
pH:	5.56 (1% w/w dispersion in DIW)
Melting point/freezing point:	No data available
Initial boiling point and boiling range	No data available
Flash point:	148.3° F (64.6° C)
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	1.053 g/mL @ 20° C
Solubility(ies):	No data available
Partition coefficient: n-octanol/water:	No data available
Autoignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	17.436 cSt (20° C) and 7.789 cSt (40° 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

Reactivity: Not reactive
Chemical Stability: This material is stable under normal handling and storage conditions.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
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.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Dermal
Symptoms of Exposure:
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, anesthesia, drowsiness, unconsciousness and other central nervous system effects, possibly including death.
Delayed, immediate and chronic effects of exposure: None reported.

Toxicological Data:
 Data from laboratory studies conducted on this product are summarized below:
Oral: Rat LD₅₀: 1,030 mg/kg (females)
Dermal: Rat LD₅₀: >5,000 mg/kg
Inhalation: Rat 4-hr LC₅₀: >2.04 mg/L (no mortalities at highest dose tested)
Eye Irritation: Rabbit: Moderately irritating (MMTS=41.0)
Skin Irritation: Rabbit: Moderately irritating (PDII=4.8)
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:

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

*Reasonably anticipated to be a human carcinogen

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 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**DOT****< 119 gallons per completed package**

Non Regulated

≥ 119 gallons and < 265 gallons per completed package

NA 1933, COMBUSTIBLE, N.O.S., (NAPHTHALENE), 3, III

≥ 265 gallons per completed package

NA 1933, COMBUSTIBLE, N.O.S., (NAPHTHALENE), 3, III, RQ

IMDG

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

15. REGULATORY INFORMATION**EPA FIFRA INFORMATION**

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

WARNING. Causes substantial but temporary eye injury. Causes skin irritation. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Wear protective eyewear such as goggles, face shield, or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

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) 40.5 – 43.5 % by wt. in product.

Naphthalene (CAS No. 91-20-3) <4.0% by wt. in product.

1,2,4-Trimethylbenzene (CAS No. 95-63-6) <1.0% by wt. in product.

Reportable Quantity (RQ) under U.S. CERCLA:

Naphthalene (CAS No. 91-20-3) 100 lbs

RCRA Waste Code:

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: WARNING! This product contains naphthalene, a chemical known to the State of California to cause cancer

16. OTHER INFORMATION**National Fire Protection Association (NFPA) Hazard Rating:****Rating for this product: Health: 3 Flammability: 2 Reactivity: 0**

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This SDS 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.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

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