

SAFETY DATA SHEET
DISARM TURF FUNGICIDE

SDS # : 7689-A
Revision date: 2020-01-10
Format: NA
Version 1.04



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name DISARM TURF FUNGICIDE

Other means of identification

Product Code(s) 7689-A

Synonyms FLUOXASTROBIN: (E)-{ 2-[6-(2-chlorophenoxy)-5-fluoropyrimidin-4-yloxy]phenyl}
(5,6-dihydro-1,4,2-dioxazin-3-yl)methanone O-methyloxime (IUPAC name);
(1E)-[2-[[[6-(2-chlorophenoxy)-5-fluoro-4-pyrimidinyl]oxy]phenyl]](5,6-dihydro-1,4,2-dioxazin-3-yl)methanone O-methyloxime (CAS name)

Active Ingredient(s) Fluoxastrobin

Chemical Family Strobiluron

PCP # 31857

Recommended use of the chemical and restrictions on use

Recommended Use: Fungicide

Restrictions on Use: Use as recommended by the label.

Supplier Address

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
800 / 321-1FMC (1362) (General Information)
SDS-info@fmc.com (E-Mail General Information)

Emergency telephone number

Medical Emergencies:
800 / 331-3148 (U.S.A. & Canada)
651 / 632-6793 (All Other Countries - Collect)

For leak, fire, spill or accident emergencies, call:
703 / 741 5970 (CHEMTREC - International)
703 / 527 3887 (CHEMTREC - Alternate)

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
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 1
Acute aquatic toxicity	Category 1

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Danger

Hazard Statements
 H332 - Harmful if inhaled
 H317 - May cause an allergic skin reaction
 H372 - Causes damage to organs through prolonged or repeated exposure
 H400 - Very toxic to aquatic life



Precautionary Statements - Prevention

P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P271 - Use only outdoors or in a well-ventilated area
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
 P314 - Get medical advice/ attention if you feel unwell
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
 P391 - Collect spillage

Precautionary Statements - Disposal

P501 - Dispose of contents/container according to label directions

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

May be harmful in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Strobiluron.

Chemical name	CAS-No	Weight %
Fluoxastrobin	361377-29-9	40.3
Propylene glycol	57-55-6	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	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	Possible systemic effects through repeated exposure. If inhaled, may cause irritation to the nose, throat, and upper respiratory tract. Symptoms may include coughing and sneezing. Skin contact may cause irritation and allergic reactions.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water spray, Foam, Dry powder, Carbon dioxide (CO ₂), Sand.
Specific Hazards Arising from the Chemical	Not flammable
Hazardous Combustion Products	In the event of fire, the formation of hydrogen chloride, hydrogen cyanide, hydrogen fluoride, carbon monoxide, and nitrogen oxide must be anticipated.
Explosion data	
Sensitivity to Mechanical Impact	No information available.
Sensitivity to Static Discharge	No information available.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus and full protective gear. Prevent runoff from fire control from entering streams, sewers, or drinking water supply.

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.
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	Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. To clean the floor and all objects contaminated by this material, use damp cloth. Place used cleaning materials into closed receptacles.

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.
Storage	Keep away from open flames, hot surfaces and sources of ignition. Keep in a dry, cool and well-ventilated place. Keep out of reach of children and animals. Keep/store only in original container.

Incompatible products No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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	-

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 Rubber/latex/neoprene or other suitable chemical resistant gloves. Use protective gloves made of chemical materials such as nitrile or neoprene. Wash the outside of gloves with soap and water before reuse. Check regularly for leaks.

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. Remove and wash contaminated clothing before re-use. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Off-white Viscous Liquid
Physical State	Liquid Suspension
Color	No information available
Odor	Paint-like
Odor threshold	No information available
pH	6.8 (10% solution)
Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	Not applicable
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
Relative density	No information available
Specific gravity	No information available
Water solubility	Not applicable
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	822 cps @ 25°C
Explosive properties	No information available
Oxidizing properties	No information available
Molecular weight	No information available
Bulk density	1.19 @ 20°C
K _{st}	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks
Incompatible materials	No information available.
Hazardous Decomposition Products	In the event of fire, the formation of hydrogen chloride, hydrogen cyanide, hydrogen fluoride, carbon monoxide, and nitrogen oxide must be anticipated.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral	> 5000 mg/kg (rat)
LD50 Dermal	> 5000 mg/kg (rat)
LC50 Inhalation (vapor)	> 4.9 mg/L (rat) (4-hr)

Serious eye damage/eye irritation	Non-irritating.
Skin corrosion/irritation	Minimally irritating.
Sensitization	Sensitizer

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation (vapor)
Fluoxastrobin (361377-29-9)	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	= 4.9 mg/L (Rat) 4 h
Propylene glycol (57-55-6)	20000 mg/kg (Rat)	20800 mg/kg (Rabbit)	

Information on toxicological effects

Symptoms	No information available.
----------	---------------------------

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity	Fluoxastrobin showed reduced body weight and hepatocytomegaly and cytoplasmic changes associated with increased serum liver alkaline phosphatase indicative of cholestasis.
------------------	---

Mutagenicity	Fluoxastrobin, Not genotoxic in animal studies.
Carcinogenicity	Fluoxastrobin: Not carcinogenic
Neurological effects	Fluoxastrobin: No neurotoxicity observed in animal studies.
Reproductive toxicity	Fluoxastrobin: In the reproduction study, there was evidence of decreased body weight in offspring, delayed preputal separation, and incomplete ossification.
Developmental toxicity	Fluoxastrobin: Evidence of transient body weight loss and decreased food consumption.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Neurological effects	Fluoxastrobin: No neurotoxicity observed in animal studies.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life. May cause long lasting harmful effects to aquatic life.

Fluoxastrobin (361377-29-9)				
Active Ingredient(s)	Duration	Species	Value	Units
	96 h LC50	M. bahia	0.053	mg/L
	48 h EC50	Daphnia	0.48	mg/L
	96 h LC50	Cyprinus carpio	0.57	mg/L
	96 h LC50	Lepomis macrochirus (Bluegill sunfish)	0.97	mg/L

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Sodium Hydroxide 1310-73-2		96 h LC50: = 45.4 mg/L (Oncorhynchus mykiss) static	
Fluoxastrobin 361377-29-9	72-hour EC50 = 0.45 mg/L (Senastrum capricornutum)(biomass) 72-hour EC50 = 2.67 mg/L (Senastrum capricornutum)(growth rate)	96 hr LC50 = 0.435 mg/L (Oncorhynchus mykiss) 96 hr LC50 = 0.57 mg/L (Cyprinus carpio) 96 hr LC50 = 0.97 mg/L (Lepomis macrochirus)	48 hr EC50 = 0.48 mg/L (D. magna) 96 hr LC50 = 0.053 mg/L (M. bahia)
Glycerin 56-81-5		96 h LC50: 51 - 57 mL/L (Oncorhynchus mykiss) static	24 h EC50: > 500 mg/L (Daphnia magna)
Propylene glycol 57-55-6	96 h EC50: = 19000 mg/L (Pseudokirchneriella subcapitata)	96 h LC50: 41 - 47 mL/L (Oncorhynchus mykiss) static 96 h LC50: = 51400 mg/L (Pimephales promelas) static 96 h LC50: = 51600 mg/L (Oncorhynchus mykiss) static 96 h LC50: = 710 mg/L (Pimephales promelas)	48 h EC50: > 1000 mg/L (Daphnia magna) Static 24 h EC50: > 10000 mg/L (Daphnia magna)
Methyl ethyl ketone 78-93-3		96 h LC50: 3130 - 3320 mg/L (Pimephales promelas) flow-through	48 h EC50: 4025 - 6440 mg/L (Daphnia magna) Static 48 h EC50: = 5091 mg/L (Daphnia magna) 48 h EC50: > 520 mg/L (Daphnia magna)

Persistence and degradability Fluoxastrobin: Half-life is 29 to 393 days depending on soil type.

Bioaccumulation Fluoxastrobin: Material may have some potential to bioaccumulate.

Mobility Fluoxastrobin: Low mobility in soil.

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. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

Contaminated containers and Containers must be disposed of in accordance with local, state and federal regulations.

packages Refer to the product label for container disposal instructions. Do not re-use empty containers.

14. TRANSPORT INFORMATION

NOTE This product is only regulated when shipped by water or in bulk packaging.

DOT NOT REGULATED

Packaging Type	Bulk
UN/ID no	UN3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard class	9
Packing Group	III
Marine Pollutant	Fluoxastrobin.
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s. (Fluoxastrobin), 9, III, Marine Pollutant

TDG Not regulated

UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.(Fluoxastrobin)
Hazard class	9
Packing Group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s. (Fluoxastrobin), 9, III, Marine Pollutant
UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.(Fluoxastrobin)
Hazard class	9
Packing Group	III
Marine Pollutant	Yes
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s. (Fluoxastrobin), 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 does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

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
Sodium Hydroxide 1310-73-2	1000 lb			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):

DISARM TURF FUNGICIDE

SDS # : 7689-A
Revision date: 2020-01-10
Version 1.04

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Sodium Hydroxide 1310-73-2	1000 lb 454 kg	
Methyl ethyl ketone 78-93-3	5000 lb 2270 kg	

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:

*Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
 This pesticide is toxic to fish and aquatic invertebrates.*

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Propylene glycol 57-55-6	X		X

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINC S (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Propylene glycol 57-55-6	X	X	X	X	X	X	X	X

CANADA

This Safety Data Sheet is for a pesticide product registered by the Pest Management Regulatory Agency (PMRA), and is therefore also subject to certain requirements under Canadian pesticide laws, including the Pest Control Products Act (PCPA). These requirements differ from the classification criteria and hazard information required by the Hazardous Product Regulations (HPR) and WHMIS 2015 for safety data sheets, and for workplace labels of non-pesticide chemicals. The following information is determined by PMRA.

The approved pest control product label (the label), under the Pest Control Products Act, needs to be followed at all times and in cases where there are any discrepancies between the approved label and an SDS for that product it is the label information that prevails.

16. OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 0	Instability 0	Special Hazards -
HMIS	Health Hazards 1	Flammability 0	Physical hazard 0	Personal Protection X

NFPA/HMIS Ratings Legend Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Revision date: 2020-01-10
Reason for revision: SDS sections updated

DISARM TURF FUNGICIDE

SDS #: 7689-A
Revision date: 2020-01-10
Version 1.04

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Prepared By:

FMC Corporation

FMC Logo - Trademark of FMC Corporation

© 2020 FMC Corporation. All Rights Reserved.

End of Safety Data Sheet