

Material Safety Data Sheet

Dismiss® South Herbicide

SDS # : 6354-2-A
Revision Date: 2012-02-09
Version 1.01



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Dismiss® South Herbicide
Formula code	6354
Active Ingredient(s)	Sulfentrazone, Imazethapyr
Synonyms	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 N-[1-[(6-chloropyridin-3-yl)methyl]-4,5-dihydroimidazol-2-yl]nitramide
Chemical Family	Triazolinones, Imidazolinone
Manufacturer FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	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: (800) 331-3148 (U.S.A. & Canada) +1 (651) 632-6793 (All Other Countries - Collect)

2. Hazards identification

Appearance	off-white liquid
Physical state	liquid
Odor	Faint Alcohol
Flammable properties	Combustible liquid
Potential health effects Principle Routes of Exposure Acute effects	Eye contact, Skin contact, Inhalation, Ingestion.
Eyes	May cause slight irritation.
Skin	Substance may cause slight skin irritation.
Inhalation	May cause irritation of respiratory tract. May cause drowsiness and dizziness.
Ingestion	May cause central nervous system depression. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic effects

Effects are expected to be similar to those that are seen with acute toxicity. Repeated or prolonged exposure may cause central nervous system effects. May cause adverse liver effects. May cause adverse kidney effects. May cause adverse cardiovascular effects. Aspiration may cause pulmonary edema and pneumonitis. Contains toluene. Exposure to toluene in animals via inhalation and intentional overexposure to toluene in humans has caused adverse fetal development effects.

3. Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS-No	Weight %
Sulfentrazone	122836-35-5	33.3
Imazethapyr	81335-77-5	6.67
Glycerin	56-81-5	<8
Toluene	108-88-3	<2

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 treatment advice.
Inhalation	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.
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 induce vomiting or give anything by mouth to an unconscious person.

5. Fire-fighting measures

<u>Flammable properties</u>	Combustible liquid
Flash Point	76.6 °C / 170 °F
Sensitivity to Mechanical Impact	not applicable
Sensitivity to Static Discharge	yes
Suitable extinguishing media	Carbon dioxide (CO ₂). Foam. Dry powder. Water spray.
Protective equipment and precautions for firefighters	Wear self-contained breathing apparatus and protective suit.

NFPA

Health Hazard	1
Flammability	2
Stability	0
Special Hazards	-

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

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.

8. Exposure controls/personal protection

Exposure guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Glycerin 56-81-5	TWA: 10 mg/m ³	TWA: 15 mg/m ³ TWA: 5 mg/m ³		Mexico: TWA 10 mg/m ³
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

Chemical Name	British Columbia	Quebec	Ontario TWAEV	Alberta
Glycerin 56-81-5	TWA: 10 mg/m ³ TWA: 3 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³
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

Occupational exposure 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.
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Personal Protective Equipment

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.
Respiratory protection	For dust, splash, mist or spray exposures wear a filtering mask.
Eye/face protection	For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield.
Skin and body protection	Wear long-sleeved shirt, long pants, socks, shoes, and gloves.
Hand protection	Protective gloves

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.

9. Physical and chemical properties

Appearance	off-white liquid
Color	off-white
Physical state	liquid
Odor	Faint Alcohol
pH	3.36 (1% solution) @ 25 °C
Melting Point/Range	No information available.
Freezing point	No information available
Boiling Point/Range	not applicable
Flash Point	76.6 °C / 170 °F
Evaporation rate	not applicable
Autoignition Temperature	not applicable
Flammable properties	Combustible liquid
Vapor pressure	No information available
Vapor density	No information available
Density	1.2 g/mL @ 25 °C
Water solubility	Dispersible in water
Percent volatile	No information available
Partition coefficient:	not applicable
Viscosity	No information available
Oxidizing properties	not applicable

10. Stability and reactivity

Stability	Stable.
Conditions to avoid	Heat, flames and sparks
Hazardous decomposition products	Carbon oxides, nitrogen oxides (NO _x), Sulfur oxides, Hydrogen chloride, Hydrogen fluoride.
Hazardous polymerization	Hazardous polymerization does not occur

11. Toxicological information

Acute Toxicity

Signs of toxicity in laboratory animals, with sulfentrazone, included clonic convulsions, ataxia, hypersensitivity to touch, chromorhinorrhea, abdominogenital staining, decreased locomotion, lacrimation, nasal discharge, and squinting eyes. Acute poisoning from ingestion of large quantities of liquid imidazolinone herbicide has resulted in hypotension, pulmonary dysfunction, oral mucosal and gastrointestinal irritation, leukocytosis, metabolic acidosis, and transient liver and renal dysfunction. Imidazolinone herbicides are CNS depressants, causing impaired consciousness and coma in some cases. Nausea and intense vomiting shortly following ingestion is common, and diarrhea may occur. Severe symptoms have included impairment of consciousness and respiratory distress requiring intubation. Decreased blood pressure may occur following excessive doses. Mucous membranes may become ulcerated following ingestions or splashes due to the corrosive action of imidazolinone. Aspiration pneumonitis is a common clinical occurrence following ingestions.

Eye contact	Slightly or non-irritating (rabbit)
Skin contact	Slightly or non-irritating (rabbit)

LD50 Dermal	> 5000 mg/kg (rat)
LD50 Oral	5000 mg/kg (rat)
LC50 Inhalation:	> 2.09 mg/L 4 hr (rat)

Sensitization Non-sensitizing

Chronic Toxicity - Other Ingredient(s)

Chronic Toxicity Effects are expected to be similar to those that are seen with acute toxicity. Repeated or prolonged exposure may cause central nervous system effects. May cause adverse liver effects. May cause adverse kidney effects. May cause adverse cardiovascular effects. Aspiration may cause pulmonary edema and pneumonitis. Contains toluene. Exposure to toluene in animals via inhalation and intentional overexposure to toluene in humans has caused adverse fetal development effects.

Carcinogenicity Sulfentrazone, Imazethapyr: Not carcinogenic.

Mutagenicity Sulfentrazone, Imazethapyr: Not mutagenic.

Reproductive toxicity Offspring Toxicity (sulfentrazone): LOAEL = 33 mg/kg/day for males; 40 mg/kg/day for females. Imazethapyr: No toxicity to reproduction.

Neurological Effects Sulfentrazone: Altered motor activity and FOB effects, which reverse after single exposure, with no signs of histopathology

Developmental Toxicity Sulfentrazone: NOAEL of 10 mg/kg/day in the developmental toxicity study in rat. NOAEL of 14 mg/kg/day in a 2-generation reproduction study. Contains ingredients that have suspected developmental hazards: Inhalation of toluene vapors at high doses have resulted in an increased incidence of malformations and decreased fetal weight in laboratory animals. Imazethapyr: Not teratogenic in animal studies.

Target Organ Effects Sulfentrazone: Hematopoietic System.

Chemical Name	ACGIH	IARC	NTP	OSHA	NIOSH - Target Organs
Glycerin					respiratory system, skin, eyes, kidneys
Toluene					CNS, eyes, kidneys, liver, respiratory system, skin

12. Ecological information**Ecotoxicity**

Ecotoxicity effects Very toxic to aquatic organisms.

Sulfentrazone (122836-35-5)

Active Ingredient(s)	Duration	Species	Value	Units
Sulfentrazone	120 h LC50	Algae	31	µg/L
	48 h LC50	Aquatic organisms	60.4	mg/L
	96 h LC50	Fish	94	mg/L
	LD50 Oral	Bobwhite quail	>2250	mg/kg
	LD50 Dietary	Mallard duck	>5620	ppm

Imazethapyr (81335-77-5)

Active Ingredient(s)	Duration	Species	Value	Units
Imazethapyr	96 h LC50	Fish	411.47	mg/L
	EC50 96h	Algae	389.2	mg/L

	LD50 Oral	Bobwhite quail	2,200	mg/kg
	LD50 Oral	Mallard duck	2,100	mg/kg
	LD50	Bee	>100	µg/bee

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Glycerin		LC50 51 - 57 mL/L Oncorhynchus mykiss 96 h		EC50 > >500 mg/L 24 h
Toluene	>433 mg/L EC50 96 h (Pseudokirchneriella subcapitata) 12.5 mg/L EC50 72 h (Pseudokirchneriella subcapitata)	LC50 15.22-19.05 mg/L Pimephales promelas 96 h LC50 12.6 mg/L Pimephales promelas 96 h LC50 5.89-7.81 mg/L Oncorhynchus mykiss 96 h LC50 14.1-17.16 mg/L Oncorhynchus mykiss 96 h LC50 5.8 mg/L Oncorhynchus mykiss 96 h LC50 11.0-15.0 mg/L Lepomis macrochirus 96 h LC50 54 mg/L Oryzias latipes 96 h LC50 28.2 mg/L Poecilia reticulata 96 h LC50 50.87-70.34 mg/L Poecilia reticulata 96 h		EC50 5.46 - 9.83 mg/L 48 h EC50 11.5 mg/L 48 h

Environmental Fate

Sulfentrazone (122836-35-5)

Active Ingredient(s)	Type of Test	Result
Sulfentrazone	Bioconcentration factor (BCF)	2
	Half-life in soil	2-18 months
	log Pow	1.5
	Mobility in soil	Potential to reach groundwater
	Stability in water	Stable to hydrolysis over a wide range of pH values.

Chemical Name	log Pow
Glycerin	-1.76
Toluene	2.65

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 a Combustible liquid and is, therefore, not subject to the hazardous materials regulations when in non-bulk packages shipped within the USA per 49 CFR §173.150(f)(2).

Packaging Type
Proper shipping name
Hazard Class
UN/ID No

Bulk
Combustible liquid, n.o.s.
Combustible liquid
NA1993

Packing group III

TDG

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

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
 Hazard Class 9
 UN/ID No UN3082
 Packing group III
 Marine pollutant Sulfentrazone.
 Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (sulfentrazone), 9, PGIII, Marine pollutant

ICAO/IATA

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, PGIII, Marine pollutant

IMDG/IMO

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
 Hazard Class 9
 UN/ID No UN3082
 Packing group III
 EmS No. F-A, S-F
 Marine pollutant Sulfentrazone
 Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (sulfentrazone), 9, PGIII, 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	<2	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

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Toluene	1000 lb	

TSCA Inventory (United States of America)

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping
Glycerin	Partially exempt chemical substance under 40 CFR 710.46(b)(2)

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances
Toluene	10/04/1982

International Regulations**Mexico - Grade**

Slight risk, Grade 1

Chemical Name	Carcinogen Status	Mexico
Glycerin		Mexico: TWA 10 mg/m ³
Toluene		Mexico: S* Mexico: TWA 50 ppm Mexico: TWA 188 mg/m ³

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2A Very toxic materials

**16. Other information**

Revision Date: 2012-02-09
Reason for revision: (M)SDS sections updated.

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End of Material Safety Data Sheet