

SAFETY DATA SHEET
Authority® First DF Herbicide

SDS # : 6150-A
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Version 1.04



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Authority® First DF Herbicide

Other means of identification

Product Code(s) 6150-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 (IUPAC name);
N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-
1,2,4-triazol-1-yl]phenyl] methanesulfonamide (CAS name);

, CLORANSULAM-METHYL:
N-(2-carbomethoxy-6-chlorophenyl)-5-ethoxy-7-fluoro(1,2,4)triazolo-[1,5-c]pyrimidine-2-sulf
onamide

Active Ingredient(s) Sulfentrazone, Cloransulam-methyl

Chemical Family Triazolinones, Triazolopyrimidine sulfonanilide

Recommended use of the chemical and restrictions on use

Recommended Use: Herbicide

Restrictions on Use: Use as recommended by the label.

Supplier Address

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
SDS-Info@fmc.com (E-Mail General Information)

Emergency telephone number

Medical Emergencies :
1 800 / 331-3148 (U.S.A. & Canada)
1 651 / 632-6793 (All Other Countries - Collect)

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 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)

Specific target organ toxicity (repeated exposure)	Category 2
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GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Warning

Hazard Statements
 H373 - May cause damage to organs through prolonged or repeated exposure

Physical Hazards
 May form combustible dust concentrations in air



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

Precautionary Statements - Disposal

P501: Dispose of contents/container as hazardous waste in accordance with local regulations.

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, Triazolopyrimidine sulfonanilide.

Chemical name	CAS-No	Weight %
Sulfentrazone	122836-35-5	61.4
Chloroansulam-methyl	147150-35-4	7.9
Toluene	108-88-3	<5

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

Eye Contact

Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. 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. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	Central nervous system effects.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Small Fire	Dry chemical. Carbon dioxide (CO ₂).
Large Fire	Water spray. Foam.
Unsuitable extinguishing media	Avoid heavy hose streams.
Specific Hazards Arising from the Chemical	Finely dispersed particles can form explosive mixtures in air.
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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate and post spill area. 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	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Sweep up and shovel into suitable containers for disposal. Clean and neutralize spill area, tools and equipment by washing with 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
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: TWA 20 ppm
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
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

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 For dust, splash, mist or spray exposure, wear chemical protective goggles.

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

Hand Protection 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 For dust, splash, mist or spray exposures, wear a filtering mask.

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	Tan Granules
Physical State	Solid
Color	Tan
Odor	Musty
Odor threshold	No information available
pH	6-8
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	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	Fine dust dispersed in air may ignite
Oxidizing properties	No data available
Molecular weight	No information available
Bulk density	35 - 42 lb/cu ft

10. STABILITY AND REACTIVITY

Reactivity	None under normal use conditions
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	2,504 mg/kg (rat)
LD50 Dermal	> 5,000 mg/kg (rabbit)
LC50 Inhalation (dust)	> 4.9 mg/L 4 hr (rat)
Serious eye damage/eye irritation	Minimally irritating (rabbit).
Skin corrosion/irritation	Slightly irritating (rabbit).
Sensitization	Non-sensitizing

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation (vapor)
Chloroansulam-methyl (147150-35-4)	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	
Toluene (108-88-3)	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h

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	Chronic exposure to silica dust may increase the risk of developing pneumoconiosis or silicosis, chronic diseases affecting the lungs, characterized by labored breathing, cough,
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Mutagenicity reduction of work capacity, reduction of lung capacity, heart enlargement and failure
 Sulfentrazone: Not genotoxic in laboratory studies.

Carcinogenicity Sulfentrazone, Cloransulam-methyl: 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, Cloransulam-methyl: 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. Cloransulam-methyl: Not teratogenic in animal studies.

STOT - single exposure Not classified.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

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		

Legend:
 IARC (International Agency for Research on Cancer)
 Group 3 - Not classifiable as to its carcinogenicity to humans

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

Chloroansulam-methyl (147150-35-4)				
Active Ingredient(s)	Duration	Species	Value	Units
Cloransulam-methyl	LC50	Fish	>86	mg/L
	LC50	Daphnia magna	98	mg/L
	EC50	Algae	3.5-12	µg/L
	LD50 Oral	Bobwhite quail	>2200	mg/kg

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Toluene 108-88-3	72 h EC50: = 12.5 mg/L (Pseudokirchneriella subcapitata) static 96 h EC50: > 433 mg/L (Pseudokirchneriella subcapitata)	96 h LC50: 11.0 - 15.0 mg/L (Lepomis macrochirus) static 96 h LC50: 14.1 - 17.16 mg/L (Oncorhynchus mykiss) static 96 h LC50: 15.22 - 19.05 mg/L (Pimephales promelas) flow-through 96 h LC50: 5.89 - 7.81 mg/L (Oncorhynchus mykiss) flow-through 96 h LC50: 50.87 - 70.34 mg/L (Poecilia reticulata) static 96 h LC50: = 12.6 mg/L (Pimephales promelas) static 96 h LC50: = 28.2 mg/L (Poecilia reticulata) semi-static 96 h LC50: = 5.8 mg/L (Oncorhynchus mykiss)	48 h EC50: 5.46 - 9.83 mg/L (Daphnia magna) Static 48 h EC50: = 11.5 mg/L (Daphnia magna)

		semi-static 96 h LC50: = 54 mg/L (Oryzias latipes) static	
Sodium Borate 1330-43-4	96 h EC50: 2.6 - 21.8 mg/L (Pseudokirchneriella subcapitata) static 96 h EC50: = 158 mg/L (Desmodosmus subspicatus)	96 h LC50: = 340 mg/L (Limanda limanda)	48 h LC50: 1085 - 1402 mg/L (Daphnia magna)
Sodium chloride 7647-14-5		96 h LC50: 4747 - 7824 mg/L (Oncorhynchus mykiss) flow-through 96 h LC50: 5560 - 6080 mg/L (Lepomis macrochirus) flow-through 96 h LC50: 6020 - 7070 mg/L (Pimephales promelas) static 96 h LC50: 6420 - 6700 mg/L (Pimephales promelas) static 96 h LC50: = 12946 mg/L (Lepomis macrochirus) static 96 h LC50: = 7050 mg/L (Pimephales promelas) semi-static	48 h EC50: 340.7 - 469.2 mg/L (Daphnia magna) Static 48 h EC50: = 1000 mg/L (Daphnia magna)
Sodium lignosulfonate 8061-51-6		48 h LC50: = 7300 mg/L (Oncorhynchus mykiss)	

Persistence and degradability Sulfentrazone: Persistent in soil. Does not readily hydrolyze. Not readily biodegradable.

Bioaccumulation Sulfentrazone, Cloransulam-methyl: 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. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

Contaminated containers and packages 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.

UN/ID no UN3077

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (sulfentrazone, cloransulam-methyl)

Hazard class 9

Packing Group III

Marine Pollutant Sulfentrazone. Cloransulam-methyl.

Description UN3077, Environmentally hazardous substance, solid, n.o.s. (Sulfentrazone, Cloransulam-methyl), 9, PGIII, Marine Pollutant

ICAO/IATA

UN/ID no UN3077

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (sulfentrazone, cloransulam-methyl)

Hazard class 9

Packing Group III

Description UN3077, Environmentally hazardous substance, solid, n.o.s. (Sulfentrazone, Cloransulam-methyl), 9, PGIII, Marine Pollutant

IMDG/IMO

UN/ID no UN3077
Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (sulfentrazone, cloransulam-methyl)
Hazard class 9
Packing Group III
EmS No. F-A, S-F
Marine Pollutant Sulfentrazone, Cloransulam-methyl
Description UN3077, Environmentally hazardous substance, solid, n.o.s. (Sulfentrazone, Cloransulam-methyl), 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	108-88-3	<5	1.0

SARA 311/312 Hazard Categories

Acute health hazard No
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
Toluene 108-88-3	1000 lb 454 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

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

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

End of Safety Data Sheet