

**SAFETY DATA SHEET**  
Authority® First DF Herbicide

**SDS # :** 6150-A  
**Revision date:** 2016-05-26  
**Format:** NA  
**Version** 1.03



**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)  
methanesulfonamide (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 sulfonamide

**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  
2929 Walnut Street  
Philadelphia, PA 19104  
(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)


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



**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 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, 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 (within the U.S. and Canada) 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** Carbon dioxide (CO<sub>2</sub>). Foam. Dry powder. Water spray.

**Specific Hazards Arising from the Chemical** Finely dispersed particles can form explosive mixtures in air.

**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. 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 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
Toluene (108-88-3)	TWA: 20 ppm	TWA: 200 ppm Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m <sup>3</sup>	Mexico: TWA 50 ppm Mexico: TWA 188 mg/m <sup>3</sup>

			STEL: 150 ppm STEL: 560 mg/m <sup>3</sup>	
<b>Chemical name</b>	<b>British Columbia</b>	<b>Quebec</b>	<b>Ontario TWAEV</b>	<b>Alberta</b>
Toluene (108-88-3)	TWA: 20 ppm	TWA: 50 ppm TWA: 188 mg/m <sup>3</sup> Skin	TWA: 20 ppm	TWA: 50 ppm TWA: 188 mg/m <sup>3</sup> 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** Protective gloves
- 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**

<b>Appearance</b>	Tan Granules
<b>Physical State</b>	Solid
<b>Color</b>	Tan
<b>Odor</b>	Musty
<b>Odor threshold</b>	No information available
<b>pH</b>	6-8
<b>Melting point/freezing point</b>	Not applicable
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	Not applicable
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No information available
<b>Lower flammability limit:</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Density</b>	No information available
<b>Specific gravity</b>	No information available
<b>Water solubility</b>	Dispersible in water
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Viscosity, dynamic</b>	No information available
<b>Explosive properties</b>	Fine dust dispersed in air may ignite
<b>Oxidizing properties</b>	No data available
<b>Molecular weight</b>	No information available

Bulk density 35 - 42 lb/cu ft

**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** 2,504 mg/kg (rat)

**LD50 Dermal** > 5,000 mg/kg (rabbit)

**LC50 Inhalation** > 4.9 mg/L 4 hr (rat)

**Serious eye damage/eye irritation** Minimally irritating (rabbit).

**Skin corrosion/irritation** Slightly 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.

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, 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		

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

<b>Sulfentrazone (122836-35-5)</b>				
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

<b>Chloroansulam-methyl (147150-35-4)</b>				
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

**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.

**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.

**UN/ID no** UN3077  
**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  
**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  
**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.

Chemical name	California Prop. 65
Toluene - 108-88-3	Developmental

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Toluene 108-88-3	X	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)
Toluene 108-88-3	X	X	X	X	X	X	X	X

Mexico - Grade Slight risk, Grade 1

Chemical name	Carcinogen Status	Mexico
Toluene		Mexico: TWA 50 ppm Mexico: TWA 188 mg/m <sup>3</sup>

Chemical name	Mexico - Pollutant Release and Transfer Register - Reporting Emissions for Fabrication, Process or Use -Threshold Quantities	Pollutant Release and Transfer Register - Reporting Emissions - Threshold Quantities
Toluene	1000 5000 kg/yr	1000 kg/yr

**WHMIS Statement**

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 D2B - Toxic materials



**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

\*Indicates a chronic health hazard.

Revision date: 2016-05-26  
 Reason for revision: Initial Release

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**Prepared By:**

FMC Corporation

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**End of Safety Data Sheet**