

**SAFETY DATA SHEET**  
Anthem® ATZ Herbicide

SDS # : 7009-A  
Revision date: 2016-05-26  
Format: NA  
Version 1.03



**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier**

**Product Name** Anthem® ATZ Herbicide

**Other means of identification**

**Product Code(s)** 7009-A

**Synonyms** 2-Chloro-4-ethylamino-6-isopropylamino-s-triazine; FLUTHIACET-METHYL: Acetic acid, [[2-chloro-4-fluoro-5-[(tetrahydro-3-oxo-1H,3H-[1,3,4] thiadiazolo [3,4-alpha] pyridazin-1-ylidene) amino] phenyl] thio]-, methyl ester (CAS); methyl [(2-chloro-4-fluoro-5-[(1E)-3-oxo-5,6,7,8-tetrahydro-1H,3H-[1,3,4]thiadiazolo[3,4-a]pyridazin-1-ylidene]amino) phenyl)sulfanyl]acetate (IUPAC); PYROXASULFONE: 3-[[[5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]methyl]sulfonyl]-4,5-dihydro-5,5-dimethylisoxazole (CAS); 3-[5-(difluoromethoxy)-1-methyl-3-(trifluoromethyl)pyrazol-4-ylmethylsulfonyl]-4,5-dihydro-5,5-dimethyl-1,2-oxazole (IUPAC);

**Active Ingredient(s)** Atrazine, Pyroxasulfone, Fluthiacet-methyl

**Chemical Family** Triazine, Imine chemicals, Sulfonylioxazoline

**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**

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

**2. HAZARDS IDENTIFICATION**

**Classification**


**OSHA Regulatory Status**

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

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

**GHS Label elements, including precautionary statements**

**EMERGENCY OVERVIEW**

<p><b>Danger</b></p> <p><b>Hazard Statements</b>          H302 - Harmful if swallowed          H332 - Harmful if inhaled          H351 - Suspected of causing cancer          H373 - May cause damage to organs through prolonged or repeated exposure</p> 
--

**Precautionary Statements - Prevention**

P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P281 - Use personal protective equipment as required  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray

**Precautionary Statements - Response**

P308 + P313 - If exposed or concerned: Get medical advice/attention  
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
 P330 - Rinse mouth

**Precautionary Statements - Storage**

P405 - Store locked up

**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 with long lasting effects.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Family** Triazine, Imine chemicals, Sulfonyloxazoline.

Chemical name	CAS-No	Weight %
Atrazine	1912-24-9	42.5
Pyroxasulfone	447399-55-5	4.15
Fluthiacet-methyl	117337-19-6	0.15
Propylene glycol	57-55-6	5-10
2-Methylnaphthalene	91-57-6	<3

Naphtha (petroleum), heavy aromatic	64742-94-5	<2
1-Methylnaphthalene	90-12-0	<2

Synonyms are provided in Section 1.

#### 4. FIRST AID MEASURES

<b>Eye Contact</b>	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.
<b>Skin Contact</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Most important symptoms and effects, both acute and delayed</b>	None known.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Foam. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Water spray or fog.
<b>Specific Hazards Arising from the Chemical</b>	
<b>Explosion data</b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive.
<b>Sensitivity to Static Discharge</b>	Not sensitive.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate downwind.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	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.
<b>Other</b>	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<b>Environmental Precautions</b>	See Section 12 for additional Ecological Information.
<b>Methods for Containment</b>	Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
<b>Methods for cleaning up</b>	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

<b>Handling</b>	Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.
<b>Storage</b>	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. Keep/store only in original container.
<b>Incompatible products</b>	None known

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Atrazine (1912-24-9)	TWA: 2 mg/m <sup>3</sup>	-	TWA: 5 mg/m <sup>3</sup>	Mexico: TWA 10 mg/m <sup>3</sup>
2-Methylnaphthalene (91-57-6)	TWA: 0.5 ppm	-	-	-
1-Methylnaphthalene (90-12-0)	TWA: 0.5 ppm	-	-	-
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Atrazine (1912-24-9)	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>
Propylene glycol (57-55-6)	-	-	TWA: 10 mg/m <sup>3</sup> aerosol only  TWA: 50 ppm aerosol and vapor  TWA: 155 mg/m <sup>3</sup> aerosol and vapor	-
2-Methylnaphthalene (91-57-6)	TWA: 0.5 ppm Skin	-	TWA: 0.5 ppm  Skin	-
1-Methylnaphthalene (90-12-0)	TWA: 0.5 ppm Skin	-	TWA: 0.5 ppm  Skin	-

### Appropriate engineering controls

<b>Engineering measures</b>	Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. 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

<b>Eye/Face Protection</b>	For dust, splash, mist or spray exposure, wear chemical protective goggles.
<b>Skin and Body Protection</b>	Wear long-sleeved shirt, long pants, socks, shoes, chemical-resistant gloves and headgear.
<b>Hand Protection</b>	Protective gloves
<b>Respiratory Protection</b>	For dust, splash, mist or spray exposures wear a filtering mask.
<b>Hygiene measures</b>	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>	Cream White Suspension
<b>Physical State</b>	Liquid
<b>Color</b>	White
<b>Odor</b>	Solvent, Aromatic
<b>Odor threshold</b>	No information available
<b>pH</b>	4.70 (1% solution)
<b>Melting point/freezing point</b>	Not applicable
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	> 100 °C
<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>	9.43 lb/gal
<b>Specific gravity</b>	No information available
<b>Water solubility</b>	No information available
<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>	No information available
<b>Oxidizing properties</b>	No information available
<b>Molecular weight</b>	No information available
<b>Bulk density</b>	No information available

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	None under normal use conditions
<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat, flames and sparks
<b>Incompatible materials</b>	None known.
<b>Hazardous Decomposition Products</b>	Carbon oxides (COx), Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride, Hydrogen fluoride.

## 11. TOXICOLOGICAL INFORMATION

### Product Information

<b>LD50 Oral</b>	310.2 mg/kg (rat)
<b>LD50 Dermal</b>	> 2002 2000 mg/kg (rat)
<b>LC50 Inhalation</b>	2.10 mg/L (rat)
<b>Serious eye damage/eye irritation</b>	Moderately irritating.
<b>Skin corrosion/irritation</b>	Moderately irritating (rabbit).
<b>Sensitization</b>	Non-sensitizer

**Information on toxicological effects**

**Symptoms** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. May cause adverse cardiovascular effects.

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

**Chronic toxicity** Repeated or prolonged exposure may cause central nervous system effects. May cause adverse cardiovascular effects

**Mutagenicity** Pyroxasulfone, Fluthiacet-methyl: Not genotoxic in laboratory studies.

**Carcinogenicity** Atrazine: Mammary tumors noted in female rats (sex and strain specific - Sprague-Dawley rats). No effects noted in male rats of same strain, male and female rats of different strain, or in mice. Fluthiacet-methyl caused increases in benign pancreatic tumors in male rats at the highest dose, along with pancreatic and liver toxicity. There was an increase in liver tumors at two highest doses in male mice, along with hepatotoxicity, that could both be secondary to liver toxicity. New data indicates that there is no human risk.

**Neurological effects** Fluthiacet-methyl: Not neurotoxic.

**Reproductive toxicity** Atrazine:, Fluthiacet-methyl: No toxicity to reproduction in animal studies.

**Developmental toxicity** Fluthiacet-methyl: A slight delay in fetal development in the rat, with no effects in the rabbit.

**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** Cardiotoxicity was observed in dogs given high doses of Atrazine in long term studies. Fluthiacet-methyl: Liver, bone marrow, spleen, pancreas, lymphatic system, hematopoietic system, uterus and blood.

**Neurological effects** Fluthiacet-methyl: Not neurotoxic.

**Aspiration hazard** No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
Atrazine 1912-24-9	A3	Group 3		

ACGIH (American Conference of Governmental Industrial Hygienists)  
A3 - Animal Carcinogen  
IARC (International Agency for Research on Cancer)  
Group 3 - Not classifiable as to its carcinogenicity to humans

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

<b>Atrazine (1912-24-9)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
Atrazine	96 h LC50	Rainbow trout	4.5	mg/L
	5 d EC50	Algae	49	µg/L
	48 h EC50	Daphnia magna	6.9	mg/L
	12 d LD50	Bobwhite quail	940	mg/kg

<b>Pyroxasulfone (447399-55-5)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
Pyroxasulfone	96 h LC50	Rainbow trout	>2.2	mg/L
	96 h LC50	Bluegill sunfish	>2.8	mg/L
	48 h EC50	Daphnia magna	>4.4	mg/L
	96 h LC50	Algae	0.00079	mg/L

<b>Fluthiacet-methyl (117337-19-6)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
Fluthiacet-methyl	72 h LC50	Algae	0.00251	mg/L
	96 h LC50	Fish	0.043	mg/L
	48 h EC50	Crustacea	2.3	mg/L
	21 d NOEC	Fish	0.0027	mg/L

	21 d NOEC	Crustacea	0.035	mg/L
--	-----------	-----------	-------	------

<b>Persistence and degradability</b>	Atrazine, Fluthiacet-methyl: Non-persistent. Does not readily hydrolyze.
<b>Bioaccumulation</b>	Atrazine, Pyroxasulfone, Fluthiacet-methyl: The substance does not have a potential for bioconcentration.
<b>Mobility</b>	Atrazine: Very mobile; has potential to reach groundwater. Fluthiacet-methyl: Slightly mobile. Not expected to reach groundwater.

### 13. DISPOSAL CONSIDERATIONS

<b>Waste disposal methods</b>	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.
<b>Contaminated Packaging</b>	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

<b><u>DOT</u></b>	This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185.
<b><u>TDG</u></b>	Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.
<b>UN/ID no</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard class</b>	9
<b>Packing Group</b>	III
<b>Marine Pollutant</b>	Atrazine. Pyroxasulfone. Fluthiacet-methyl.
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Atrazine, Pyroxasulfone, Fluthiacet-methyl), 9, PG III, Marine Pollutant
<b><u>ICAO/IATA</u></b>	
<b>UN/ID no</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard class</b>	9
<b>Packing Group</b>	III
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Atrazine, Pyroxasulfone, Fluthiacet-methyl), 9, PG III, Marine Pollutant
<b><u>IMDG/IMO</u></b>	
<b>UN/ID no</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s.
<b>Hazard class</b>	9
<b>Packing Group</b>	III
<b>EmS No.</b>	F-A, S-F
<b>Marine Pollutant</b>	Atrazine Pyroxasulfone Fluthiacet-methyl
<b>Description</b>	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Atrazine, Pyroxasulfone, Fluthiacet-methyl), 9, PG 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:

**Anthem® ATZ Herbicide**

SDS # : 7009-A  
 Revision date: 2016-05-26  
 Version 1.03

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
Atrazine - 1912-24-9	1912-24-9	42.5	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
Acetic Acid 64-19-7	5000 lb			X
Naphthalene 91-20-3	100 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
Acetic Acid 64-19-7	5000 lb 2270 kg	
Naphthalene 91-20-3	100 lb 45.4 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:*

**WARNING**

*May be fatal if swallowed. Harmful if absorbed through skin.*

*This pesticide is toxic to fish, aquatic invertebrates, and to some plants at very low concentrations.*

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals.

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
Atrazine 1912-24-9	X	X	X
Propylene glycol 57-55-6	X		X
2-Methylnaphthalene 91-57-6	X		
1-Methylnaphthalene 90-12-0	X	X	X



International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Atrazine 1912-24-9	X	X	X	X	X	X	X	X
Propylene glycol 57-55-6	X	X	X	X	X	X	X	X
2-Methylnaphthalene 91-57-6	X	X	X	X	X		X	X
Naphtha (petroleum), heavy aromatic 64742-94-5	X	X	X	X	X	X	X	X
1-Methylnaphthalene 90-12-0	X	X	X	X	X		X	X

Mexico - Grade Moderate risk, Grade 2

Chemical name	Carcinogen Status	Mexico
Atrazine		Mexico: TWA 10 mg/m <sup>3</sup>

WHMIS Hazard Class D1B - Toxic materials  
 D2A - Very toxic materials



**16. OTHER INFORMATION**

NFPA	Health Hazards 2	Flammability 1	Instability 0	Special Hazards -
HMIS	Health Hazards 2*	Flammability 1	Physical hazard 0	Personal Protection X

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

**Disclaimer**

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. Use of this product is regulated by the U.S. Environmental Protection Agency (EPA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Further, since the conditions and methods of use are beyond the control of FMC Corporation, FMC corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

Prepared By:

FMC Corporation

FMC Logo and Cadet - Trademarks of FMC Corporation

© 2016 FMC Corporation. All Rights Reserved.

**End of Safety Data Sheet**