

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>Danger</p> <p>Hazard Statements 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> 
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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

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 (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. Do not give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	None known.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

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

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	See Section 12 for additional Ecological Information.
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.

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. Keep/store only in original container.
Incompatible products	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 ³	-	TWA: 5 mg/m ³	Mexico: TWA 10 mg/m ³
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 ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³
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	-
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

Engineering measures	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.
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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, shoes, chemical-resistant gloves and headgear.
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

Appearance	Cream White Suspension
Physical State	Liquid
Color	White
Odor	Solvent, Aromatic
Odor threshold	No information available
pH	4.70 (1% solution)
Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	> 100 °C
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
Density	9.43 lb/gal
Specific gravity	No information available
Water solubility	No information available
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	No information available
Oxidizing properties	No information available
Molecular weight	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	None under normal use conditions
Chemical Stability	Stable under recommended storage 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	None known.
Hazardous Decomposition Products	Carbon oxides (COx), Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride, Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Product Information

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

Atrazine (1912-24-9)				
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

Pyroxasulfone (447399-55-5)				
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

Fluthiacet-methyl (117337-19-6)				
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
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Persistence and degradability	Atrazine, Fluthiacet-methyl: Non-persistent. Does not readily hydrolyze.
Bioaccumulation	Atrazine, Pyroxasulfone, Fluthiacet-methyl: The substance does not have a potential for bioconcentration.
Mobility	Atrazine: Very mobile; has potential to reach groundwater. Fluthiacet-methyl: Slightly mobile. Not expected to reach groundwater.

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

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

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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 ³

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

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Prepared By:

FMC Corporation

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End of Safety Data Sheet