

**DuPont™ Afforia™ Herbicide**

Version 2.1

Revision Date 08/07/2014

Ref. 130000130061

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DuPont™ Afforia™ Herbicide
Tradename/Synonym : DPX-UTM01 50.8WG Blend
Flumioxazin: 2-[7-fluor-3,4-dihydro-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione
Thifensulfuron methyl:Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate
TRIBENURON METHYL: Methyl 2-[[[N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]benzoate

MSDS Number : 130000130061

Product Use : Herbicide

Manufacturer : DuPont
1007 Market Street
Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Caution

Harmful if absorbed through the skin or inhaled. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes and clothing. Avoid breathing dust or spray mist. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before re-use.

This product is toxic to: Aquatic invertebrates

Potential Health Effects



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This section includes potential acute adverse effects which could occur if this material is not used according to the label.

Skin

Flumioxazin : May cause: slight irritation, Redness, Swelling, Information given is based on data obtained from similar substances..

Thifensulfuron methyl : May cause skin irritation.
May cause: Irritation with discomfort or pain, redness or rash, itching or swelling.

Tribenuron methyl : May cause allergic skin reaction.

Eyes : May cause: Irritation with discomfort, pain, redness, or visual impairment.

Inhalation

Flumioxazin : May cause: Respiratory tract irritation, Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough., nasal effects, Information given is based on data obtained from similar substances..

Thifensulfuron methyl : May cause: Respiratory irritation, Discomfort, Cough.

Ingestion

Flumioxazin : Prolonged contact may cause: Abnormal liver function, Abnormal serum enzyme levels, anemia, Information given is based on data obtained from similar substances..

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Flumioxazin	103361-09-7	40.8 %

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Thifensulfuron methyl	79277-27-3	5 %
Tribenuron methyl	101200-48-0	5 %
Other Ingredients		49.2 %

SECTION 4. FIRST AID MEASURES

- Skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- Eye contact : Hold eye 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 eye. Call a poison control center or doctor for 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 treatment advice.
- Ingestion : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.
- General advice : Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
For medical emergencies involving this product, call toll free 1-800-441-3637.
See Label for Additional Precautions and Directions for Use.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO₂)
- Unsuitable extinguishing media : High volume water jet, (contamination risk)



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Firefighting Instructions : Wear full protective clothing and self-contained breathing apparatus. (on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Wear suitable protective equipment.

Spill Cleanup : Sweep up and shovel into suitable containers for disposal.

Accidental Release Measures : Prevent material from entering sewers, waterways, or low areas. Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel) : Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Handling (Physical Aspects) : Keep away from heat and sources of ignition.

Storage : Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in original container. Store in a cool, dry place. Keep out of the reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls : When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS)



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for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.
IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

Personal protective equipment

Skin and body protection : Mixers, loaders, applicators and other handlers must wear:
 Long sleeved shirt and long pants
 Chemical resistant gloves made of any waterproof material, such as polyethylene or polyvinyl chloride.
 Shoes plus socks
 PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:
 Coveralls
 Chemical resistant gloves made of any waterproof material, such as polyethylene or polyvinyl chloride.
 Shoes plus socks

Protective measures : Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Use this product in accordance with its label.

Exposure Guidelines
 Exposure Limit Values

Tribenuron methyl			
AEL *	(DUPONT)	0.5 mg/m3	12 hr. TWA
AEL *	(DUPONT)	1 mg/m3	8 hr. TWA
Thifensulfuron methyl			
AEL *	(DUPONT)	5 mg/m3	8 & 12 hr. TWA Total dust.

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* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: solid, granules
Color	: light brown, off-white
Odor	: Faint odour
pH	: 8.0
Oxidising Substance	: The product is not oxidizing.
Bulk density	: 0.57 mg/l
Water solubility	: soluble

SECTION 10. STABILITY AND REACTIVITY

Stability	: Stable at normal temperatures and storage conditions.
Conditions to avoid	: None reasonably foreseeable.
Incompatibility	: No materials to be especially mentioned.
Hazardous reactions	: Polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

DuPont™ Afforia™ Herbicide	
Inhalation 4 h LC50	: > 0.969 mg/l , Rat
Dermal LD50	: > 2,000 mg/kg , Rabbit
Oral LD50	: > 5,000 mg/kg , Rat
Skin irritation	: slight irritation, Rabbit
Eye irritation	: Moderate eye irritation, Rat
Sensitisation	: May cause sensitisation by skin contact., Guinea pig
Further information	: Information given is based on data on the components.



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Flumioxazin

- Repeated dose toxicity : Oral
Rat

altered hematology, Organ weight changes

Oral
Dog

Prolonged blood-clotting time, altered blood chemistry, Increased liver weight, Liver effects
- Carcinogenicity : Animal testing did not show any carcinogenic effects.
- Mutagenicity : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Did not show mutagenic effects in animal experiments.
- Reproductive toxicity : Experiments have shown reproductive toxicity effects on laboratory animals.

Presumed human reproductive toxicant

Thifensulfuron methyl

- Repeated dose toxicity :

The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Oral - feed
multiple species

Reduced body weight gain
- Carcinogenicity : Animal testing did not show any carcinogenic effects.
- Mutagenicity : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Animal testing did not show any mutagenic effects.
- Reproductive toxicity : No toxicity to reproduction
Animal testing showed no reproductive toxicity.
- Teratogenicity : Did not show teratogenic effects in animal experiments.



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Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Tribenuron methyl

Repeated dose toxicity :

The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Oral - feed
 Mouse
 90 d
 Reduced body weight gain

Oral
 Rat
 28 d
 Reduced body weight gain

Carcinogenicity : Not classifiable as a human carcinogen.
 An increased incidence of tumours was observed in laboratory animals.
 Target(s):
 Mammary glands

Mutagenicity : Animal testing did not show any mutagenic effects.
 Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Reproductive toxicity : No toxicity to reproduction

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity
 Flumioxazin

- 96 h LC50 : Oncorhynchus mykiss (rainbow trout) 2.3 mg/l
- 96 h LC50 : Lepomis macrochirus (Bluegill sunfish) > 21 mg/l
- 96 h LC50 : Cyprinodon variegatus (sheepshead minnow) > 4.7 mg/l
- 48 h LC50 : Daphnia magna (Water flea) 5.5 mg/l


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96 h LC50	:	Americamysis bahia (mysid shrimp) 0.23 mg/l
Thifensulfuron methyl 96 h LC50	:	Oncorhynchus mykiss (rainbow trout) > 100 mg/l
14 d EC50	:	Lemna minor (duckweed) 0.0013 mg/l
48 h EC50	:	Daphnia magna (Water flea) 470 mg/l
Tribenuron methyl 96 h LC50	:	Oncorhynchus mykiss (rainbow trout) 738 mg/l
120 h EC50	:	Pseudokirchneriella subcapitata (microalgae) 0.0208 mg/l
14 d EC50	:	Lemna gibba (duckweed) 0.00424 mg/l
48 h EC50	:	Daphnia magna (Water flea) > 894 mg/l
Additional ecological information	:	Environmental Hazards: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply where/when conditions favour runoff. Run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. See product label for additional application instructions relating to environmental precautions.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal	:	Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
Container Disposal	:	Container Refilling and Disposal: Refer to the product label for instructions. Do not transport if this container is damaged or leaking. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.


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SECTION 14. TRANSPORT INFORMATION

IATA_C	UN number	: 3077
	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Flumioxazin, Tribenuron methyl)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9MI
IMDG	UN number	: 3077
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Flumioxazin, Tribenuron methyl)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
	Marine pollutant	: yes (Flumioxazin, Tribenuron methyl)

Not regulated as a hazardous material by DOT.

SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s)	: Tribenuron methyl
EPA Reg. No.	: 352-889 In the United States this product is regulated by the US Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.
PA Right to Know Regulated Chemical(s)	: Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Kaolin , Trisodium phosphate dodecahydrate



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SECTION 16. OTHER INFORMATION

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Contact person : DuPont Crop Protection, Wilmington, DE, 19898, Phone: 1-888-638-7668

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