

SAFETY DATA SHEET
Nuance Herbicide

SDS # : FO002230-A
Revision date: 2018-12-18
Format: NA
Version 1.01



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Nuance Herbicide

Other means of identification

Product Code(s) FO002230-A

Synonyms TRIBENURON-METHYL - Benzoic acid, 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-methylamino]carbonyl]amino]sulfonyl]-, methyl ester (CAS name); Methyl 2-[4-methoxy-6-methyl-1,3,5-triazin-2-yl(methyl) carbamoylsulfamoyl]benzoate (IUPAC name)

Active Ingredient(s) Tribenuron-methyl

Chemical Family Triazinylsulfonylurea herbicides

PCP # 29468

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)
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 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

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

GHS Label elements, including precautionary statements**EMERGENCY OVERVIEW****Warning****Hazard Statements**

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Physical Hazards

May form combustible dust concentrations in air

**Precautionary Statements - Prevention**

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P271 - Use only outdoors or in a well-ventilated area

P272 - Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

P302 + P352 - IF ON SKIN: Wash with plenty of water and soap

P312 - Call a POISON CENTER or doctor if you feel unwell

P363 - Wash contaminated clothing before reuse

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P311 - Call a POISON CENTER or doctor

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

P330 - Rinse mouth

P391 - Collect spillage

Precautionary Statements - Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

Precautionary Statements - Disposal

P501 - Dispose of contents/container according to label directions

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** Triazinylsulfonyleurea herbicides.

Chemical name	CAS-No	Weight %
Tribenuron-methyl	101200-48-0	75
Calcium carbonate	471-34-1	1-5
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt	9084-06-4	1-5

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

Eye Contact	Hold eyes open and rinse slowly and gently with water for 15 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. Wash contaminated clothing before reuse.
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	Do NOT induce vomiting. Rinse mouth. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Immediate medical attention is required.
Most important symptoms and effects, both acute and delayed	<p>Skin contact: May see mild irritation at the site of contact.</p> <p>Eye contact: Possible irritation and redness.</p> <p>Ingestion: Possible irritation of the throat.</p> <p>Inhalation: May experience irritation of the throat with a feeling of tightness in the chest.</p> <p>Delayed/Immediate effects: Immediate effects can be expected after short-term exposure. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.</p>
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water fog, foam, carbon dioxide, dry chemical. Use water spray or fog; do not use straight streams.
Specific Hazards Arising from the Chemical	Not flammable. Product may ignite and burn at temperatures exceeding the flash point. Closed containers may rupture violently under fire conditions. Fine dust dispersed in air may ignite
Hazardous Combustion Products	Carbon oxides (COx), Sulfur oxides, Nitrogen oxides (NOx), Calcium oxides.
Explosion data	
Sensitivity to Mechanical Impact	Not expected to be sensitive to mechanical impact.
Sensitivity to Static Discharge	Not expected to be sensitive to static discharge.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus and full protective gear. Move containers from fire area if you can do it without risk. Use water spray to cool fire exposed surfaces and protect personnel.

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.

Nuance Herbicide

SDS # : FO002230-A

Revision date: 2018-12-18

Version 1.01

Environmental Precautions	Prevent material from entering into soil, ditches, sewers, waterways, and/or groundwater. See Section 12, Ecological Information for more detailed information. Contain the spill to prevent any further contamination of surface, soil or water.
Methods for Containment	Dike far ahead of spill; use dry sand to contain the flow of material. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled material with inert, non-combustible absorbent material, such as sand. Sweep up and shovel into suitable containers for disposal. For a water spill, confine the spill immediately with booms. Large spills that soak into the ground should be dug up, placed into suitable containers and disposed of appropriately (see Section 13). Notify the appropriate authorities as required.

7. HANDLING AND STORAGE

Handling	Wear personal protective equipment. Use in well ventilated areas to prevent formation of explosive dust-air mixtures. Avoid contact with skin, eyes and clothing. Do not breathe vapors/dust. Keep away from open flames, hot surfaces and sources of ignition. Keep container tightly closed. Wash thoroughly after handling.
Storage	Keep away from open flames, hot surfaces and sources of ignition. Keep in a dry, cool and well-ventilated place. Keep out of reach of children and animals. Keep/store only in original container.
Incompatible products	Strong oxidizing agents, Acids, fluorine, Powdered magnesium

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Calcium carbonate (471-34-1)	-	-	TWA: 10 mg/m ³ TWA: 5 mg/m ³	-
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Calcium carbonate (471-34-1)	-	TWA: 10 mg/m ³	-	TWA: 10 mg/m ³

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.
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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, Safety glasses with side-shields. Maintain eye wash fountain and quick-drench facilities in work area.
Skin and Body Protection	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear protective gloves/clothing.
Hand Protection	Wear long chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber. The breakthrough times of these materials for the product are unknown. Generally, however, the use of protective gloves will give only partial protection against dermal exposure. Small tears in the gloves and cross-contamination can easily occur. It is recommended to limit the work to be done manually and to change the gloves frequently. Be careful not to touch anything with contaminated gloves. Used gloves should be thrown out and not be reused.
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved

respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures

Avoid breathing vapors, mist or gas. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Must have clean water available for washing in case of eye or skin contamination. Wash skin before eating, drinking, chewing gum, or using snuff. Shower after work. Remove contaminated clothing and wash before reuse. Wash all work clothing separately; do not mix with household laundry.

General information

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Solid
Physical State	Solid
Color	Beige
Odor	Odorless
Odor threshold	No information available
pH	6.89
Melting point/freezing point	Not applicable
Boiling Point/Range	Decomposes
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	Tribenuron-methyl: 4.0×10^{-09} mm Hg @25°C
Vapor density	No information available
Relative density	No information available
Specific gravity	0.5117 g/cm ³ @ 20°C
Water solubility	Tribenuron-methyl: 2040 mg/L @ 20°C, pH 7.0 28 mg/L @ 25°C, pH 4.0
Solubility in other solvents	No information available
Partition coefficient	Tribenuron-methyl: Log K _{ow} = 2.3 at pH 1.5; -0.44 at pH 7.0
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	4.27 lb/gal

10. STABILITY AND REACTIVITY

Reactivity	Stable under recommended storage 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	Keep away from open flames, hot surfaces and sources of ignition
Incompatible materials	Strong oxidizing agents, Acids, fluorine, Powdered magnesium.
Hazardous Decomposition Products	See Section 5 for more information.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral > 2000 mg/kg (rat)
LD50 Dermal > 2000 mg/kg (rat)
LC50 Inhalation > 5.18 mg/L (4-hr)

Serious eye damage/eye irritation May cause slight irritation.
Skin corrosion/irritation May cause slight irritation.
Sensitization Not expected to be sensitizing based on the components.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tribenuron-methyl (101200-48-0)	> 5 g/kg (Rat)	> 2 g/kg (Rabbit) > 2000 mg/kg (Rabbit)	> 5 mg/L (Rat) 4 h
Calcium carbonate (471-34-1)	= 6450 mg/kg (Rat)		
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt (9084-06-4)	= 3800 mg/kg (Rat)		

Information on toxicological effects

Symptoms Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. May cause irritation of respiratory tract. Symptoms from skin contact may include redness, itching and swelling. Ingestion may cause irritation of mouth, throat, and stomach. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

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

Mutagenicity Not expected to be mutagenic in humans
Carcinogenicity Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH)
Reproductive toxicity Not expected to have reproductive effects.
Teratogenicity Not expected to be a teratogen.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target organ effects Eyes, Skin, Respiratory System, Digestive system
Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Tribenuron-methyl 101200-48-0	Green algae (Rhaphidocelis subcapitata) 72-h ErC50: 68 µg/l	Rainbow trout (Oncorhynchus mykiss), 96-h LC50: 738 mg/l 21-day NOEC: 560 mg/l	Daphnids (Daphnia magna) 48-h EC50: > 894 mg/l 21-day NOEC: 41 mg/l
Sodium sulfate 7757-82-6		96 h LC50: 13500 - 14500 mg/L (Pimephales promelas) 96 h LC50: > 6800 mg/L (Pimephales promelas) static 96 h LC50: 3040 - 4380 mg/L (Lepomis macrochirus) static 96 h LC50: = 13500 mg/L (Lepomis macrochirus)	48 h EC50: = 2564 mg/L (Daphnia magna) 96 h EC50: = 630 mg/L (Daphnia magna)

Persistence and degradability Tribenuron-methyl: Non-persistent, Degradation half-lives vary with circumstances, from a few days to a few weeks in aerobic water and soil. Metabolites are considered persistent.

Bioaccumulation Tribenuron-methyl: Bioaccumulation is unlikely.

Mobility Tribenuron-methyl: Mobility in soil.

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 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 NOT REGULATED

TDG NOT REGULATED

ICAO/IATA

UN/ID no	UN3077
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s.
Hazard class	9
Packing Group	III
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Tribenuron-methyl), 9, III, Marine Pollutant

IMDG/IMO

UN/ID no	UN3077
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s.
Hazard class	9
Packing Group	III
EmS No.	F-A, S-F
Marine Pollutant	Tribenuron-methyl
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Tribenuron-methyl), 9, 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:

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
Tribenuron-methyl - 101200-48-0	101200-48-0	75	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 does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and

Nuance Herbicide

SDS # : FO002230-A

Revision date: 2018-12-18

Version 1.01

Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

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.

Avoid contact with eyes or clothing.

Wash thoroughly with soap and water after handling.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Tribenuron-methyl 101200-48-0	X		

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINC S (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Tribenuron-methyl 101200-48-0			X		X			
Calcium carbonate 471-34-1	X	X	X	X	X	X	X	X
Naphthalene sulfonic acid-formaldehyde condensate, sodium salt 9084-06-4	X	X		X	X	X	X	X

CANADA

WHMIS Statement

This product is a Pest Control Product and is not regulated as a Controlled Product under the Hazardous Products Act (HPA).

This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

WHMIS Hazard Class

Non-controlled

16. OTHER INFORMATION

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

Nuance Herbicide

SDS # : FO002230-A
Revision date: 2018-12-18
Version 1.01

**Indicates a chronic health hazard.*

NFPA/HMIS Ratings Legend

Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Revision date: 2018-12-18
Reason for revision: SDS sections updated

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End of Safety Data Sheet