



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Treaty Extra Herbicide
EPA Reg. No.: 71368-76
Product Type: Herbicide

Company Name: Nufarm Americas Inc
 11901 S. Austin Avenue
 Alsip, IL 60803
 1-800-345-3330

Telephone Numbers: For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,
 Call CHEMTREC Day or Night: 1-800-424-9300
 For Medical Emergencies Only, Call 1-877-325-1840

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not the same as on the FIFRA label. Certain sections are superseded by federal law governed by EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

2. HAZARDS IDENTIFICATION

PHYSICAL HAZARDS:

Combustible Dust

HEALTH HAZARDS:

Eye Irritation
 Carcinogen

Category 2B
 Category 2

ENVIRONMENTAL HAZARDS:

Hazardous to aquatic environment, acute
 Hazardous to aquatic environment, chronic

Category 1
 Category 1

SIGNAL WORD:

WARNING

HAZARD STATEMENTS:

May form combustible dust concentrations in air. Causes eye irritation. Suspected of causing cancer. Very toxic to the aquatic environment with long lasting effects.



PRECAUTIONARY STATEMENTS

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Use personal protective equipment as required. Avoid release to the environment.

IF exposed or concerned: Get medical advice.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

Collect spillage.

Store locked up.

Dispose of contents in accordance with local, state, and federal regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	% BY WEIGHT
Thifensulfuron Methyl	79277-27-3	48.5 – 51.5
Tribenuron Methyl	101200-48-0	24.25 – 25.75
Kaolin	1332-58-7	5.3 – 5.9
Titanium dioxide	13463-67-7	< 0.15
Other Ingredients	Trade Secret	Trade Secret

Synonyms: Mixture containing Thifensulfuron-methyl (Methyl 3-[[[[(4-methoxy-6-methyl-1, 3, 5-Triazin-2-yl) amino] carbonyl] amino] sulfonyl] -2-thiophenecarboxylate) and Tribenuron methyl (methyl 2-[4-methoxy-6-methyl-1,3,5-triazin-2-yl(methyl)carbamoysulfamoyl]benzoate)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

If on Skin or Clothing: Take off contaminated clothing. Wash with soap and water. Get medical attention if irritation develops and persists.

If in Eyes: Hold eye open and rinse slowly and gently with water several minutes. Remove contact lenses, if present, then continue rinsing eye. Get medical attention if irritation develops and persists.

If Inhaled: Move person to fresh air. If symptoms develop, get medical advice.

If Swallowed: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. If symptoms develop, get medical advice.

Most important symptoms/effects, acute and delayed: May cause mild eye and skin irritation.

Indication of Immediate medical attention and special treatment if needed: Immediate medical attention should not be required. For ingestion there is no specific antidote available. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.

Special Fire Fighting Procedures: Firefighters should wear NIOSH approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source, is a potential dust explosion hazard. If dry, sweep or scoop up material and place into container for disposal. If wet, pump any free liquid into an appropriate closed container. If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later. Decontaminate tools and equipment following cleanup.

Hazardous Decomposition Materials (Under Fire Conditions): May produce oxides of carbon and nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Cleanup and Disposal: If dry, sweep or scoop up material and place into container for disposal. If wet, pump any free liquid into an appropriate closed container. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Handling:

Avoid contact with eyes, skin, or clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put

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on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Storage:

Store product in original container only. Store in a cool, dry place. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:

Eye/Face Protection: Not normally required. To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, shoes, socks and chemical-resistant gloves made of any waterproof material. An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Thifensulfuron Methyl	NE	NE	NE	NE	
Kaolin	15 (T) 5 (R)	NE	2.0 (R)	NE	mg/m ³
Titanium dioxide	15 (T)	NE	10	NE	mg/m ³
Other Ingredients	NE	NE	NE	NE	

NE = Not Established

T = Total Dust

R = Respirable Fraction

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Beige colored granular solid
Odor:	Slight odor
Odor threshold:	No data available
pH:	5.43 (1% w/w dispersion in DIW)
Melting point:	No data available
Initial boiling point and boiling range	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	0.665 g/cm ³ (Tap)
Solubility(ies):	No data available
Partition coefficient: n-octanol/water:	No data available
Autoignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	Not applicable due to product form (solid, granules)

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.

Chemical Stability: This material is stable under normal handling and storage conditions.

Possibility of Hazardous Reactions: Will not occur

Conditions to Avoid: Keep away from heat, sparks and open flame. Minimize dust generate and accumulation.

Incompatible Materials: Not known.

Hazardous Decomposition Products: Under fire conditions may produce oxides of carbon and nitrogen.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eye contact, Skin contact.

Eye Contact: Moderately irritating based on toxicity studies.

Skin Contact: Slightly toxic and moderately irritating based on toxicity studies.

Ingestion: Slightly toxic based on toxicity studies.

Inhalation: Low inhalation toxicity.

Delayed, immediate and chronic effects of exposure: None expected.

Toxicological Data:

Data from laboratory studies conducted on Thifensulfuron-Methyl Technical:

Oral: Rat LD₅₀: >5,000 mg/kg

Dermal: Rabbit LD₅₀: >5,000 mg/kg

Inhalation: Rat 4-hr LC₅₀: >2.01 mg/L (no mortalities at highest dose tested)

Eye Irritation: Rabbit: Moderately irritating (MMTS=27.3)

Skin Irritation: Rabbit: Moderately irritating (PDII=3.8)

Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.

Subchronic (Target Organ) Effects: Repeated ingestion exposures to thifensulfuron-methyl caused decreased body and organ weights, and some blood chemistry changes, including increased blood urea nitrogen and decreased protein and globulins. Repeated ingestion exposure to tribenuron-methyl may cause body weight loss and effect liver and thyroid.

Carcinogenicity / Chronic Health Effects: Repeated overexposure to thifensulfuron-methyl may cause effects to liver, gall bladder, and blood chemistry. Repeated overexposure to tribenuron methyl may cause effects to body weight loss, alteration in clinical chemical parameters and testicular atrophy (considered to be biologically insignificant). No carcinogenic effects were observed in animal tests with thifensulfuron-methyl. Tribenuron methyl produced an increased incidence of mammary tumors in female rats at dose levels also producing other significant effects. This product contains a clay. Crystalline silica (e.g. quartz) and titanium dioxide are a naturally occurring components of clay. Inhalation of crystalline silica may cause pulmonary fibrosis (silicosis). Crystalline silica has been classified by IARC as carcinogenic to humans (Group 1), by the U.S. National Toxicology Program as a known human carcinogen and by ACGIH as a suspected human carcinogen (A2). Inhalation of titanium dioxide may cause irritation to the respiratory system. IARC lists exposure to titanium dioxide as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans.

Reproductive Toxicity: Animal tests with thifensulfuron-methyl have not demonstrated reproductive effects. For tribenuron methyl no reproductive effects were observed in rats.

Developmental Toxicity: Thifensulfuron-methyl studies in laboratory animals show effects only at exposure levels producing toxic effects in the adult animal. Development effects with tribenuron methyl occurred in the rat, but only at a dose level also toxic to the mother.

Genotoxicity: Neither *in vitro* nor *in vivo* tests on Thifensulfuron-methyl demonstrated mutagenic effects. Tribenuron-methyl did not produce genetic damage in bacterial or mammalian cell cultures or in animals.

Assessment Carcinogenicity:

This product contains substances that are considered to be probable or suspected human carcinogens as follows:

Component	Regulatory Agency Listing As Carcinogen			
	ACGIH	IARC	NTP	OSHA
Thifensulfuron Methyl	No	No	No	No
Tribenuron Methyl	No	No	No	No
Kaolin	A4	No	No	No
Titanium dioxide	A4	2B	No	No
Other Ingredients	No	No	No	No

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Data on Thifensulfuron-Methyl:

96-hour LC ₅₀ Bluegill:	>100 mg/l	Bobwhite Quail Dietary LC ₅₀ :	>5,620 ppm
96-hour EC ₅₀ Rainbow Trout:	>100 mg/l	Mallard Duck Oral LD ₅₀ :	>2,510 mg/kg
48-hour EC ₅₀ Daphnia:	470 mg/l	Mallard Duck Dietary LC ₅₀ :	>5,620 ppm
72-hour EC ₅₀ Green Algae	0.0159 mg/l		

Data on Tribenuron-Methyl:

96-hour LC ₅₀ Bluegill:	>1,000 mg/l	Bobwhite Quail 8-day Dietary LC ₅₀ :	>5,620 ppm
96-hour EC ₅₀ Rainbow Trout:	>1,000 mg/l	Bobwhite Quail Oral LD ₅₀ :	>2,250 mg/kg
48-hour EC ₅₀ Daphnia:	720 mg/l	Mallard Duck 8-day Dietary LC ₅₀ :	>5,620 ppm
72-hour EC ₅₀ Green Algae	0.011 mg/l	Honey Bee Contact LD ₅₀ :	>100 µg/bee

Environmental Fate:

The potential for mobility of Thifensulfuron-methyl in soil is very high with Koc values ranging from 13 – 55. Thifensulfuron-methyl has an average hydrolysis half-life of less than 7 days. The average field half-life is 12 days. Data suggests that tribenuron-methyl is weakly adsorbed in soil and that the adsorption is pH dependent, increasing in acidic soils. The average soil half-life for tribenuron methyl is 10 days. Hydrolysis of tribenuron-methyl is also strongly pH dependent. The solubility and stability of tribenuron-methyl increases with increasing pH. Photodegradation in water and on soil is not an important degradation mechanism.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling and Disposal:

For Plastic Containers: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container half full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times.

For Fiber Sacks: Nonrefillable container. Do not reuse or refill this container. Completely empty sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then offer for recycling, if available, or dispose of sack in a sanitary landfill or by or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Fiber Drums with Liners: Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then offer for recycling, if available, or dispose of liner in a sanitary landfill or by or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Paper and Plastic Bags: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this SDS.

DOT

< 882 pounds per complete package

Non Regulated

≥ 882 pounds per complete package

UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, NOS, (THIFENSULFURON-METHYL, TRIBENURON-METHYL), 9, III, MARINE POLLUTANT

IMDG

UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, NOS, (THIFENSULFURON-METHYL, TRIBENURON-METHYL), 9, III, MARINE POLLUTANT

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15. REGULATORY INFORMATION

EPA FIFRA INFORMATION

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing.

U.S. FEDERAL REGULATIONS

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):

Acute Health, Chronic Health, Fire Hazard

Section 313 Toxic Chemical(s):

Tribenuron-methyl (CAS No. 101200-48-0) 25% by weight in product

Reportable Quantity (RQ) under U.S. CERCLA:

None

RCRA Waste Code:

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: Not listed.

16. OTHER INFORMATION

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 1 Flammability: 2 Reactivity: 0

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

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