

SAFETY DATA SHEET**TORMENT**

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1. IDENTIFICATION

Product name:

TORMENT

Chemical name of active ingredient(s):

Sodium salt of Fomesafen: 5-[2-chloro-4-(trifluoromethyl)phenoxy]-N-(methylsulfonyl)-2-nitrobenzamide**Ammonium salt of Imazethapyr:** (±)-2[4, 5-dihydro 4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]5-ethyl-3-pyridinecarboxylic acid

Manufactured for:

Makhteshim Agan of North America, Inc.

3120 Highwoods Boulevard, Suite 100

Raleigh, NC 27604

Phone: 1-919-256-9300

Phone: 1-800-535-5053

For fire, spill, and/or leak emergencies, contact Infotrac:

For medical emergencies and health and safety inquiries, contact Prozar:

Phone: 1-877-250-9291

2. HAZARDS IDENTIFICATIONS**PHYSICAL PROPERTIES:****APPARANCE:** Clear light amber liquid**ODOR:** Mild**EMERGENCY OVERVIEW:** DANGER Corrosive. Causes irreversible eye damage. Harmful if swallowed or inhaled. Do not get in eyes or on clothing. Avoid breathing spray mist.**HAZARDOUS DECOMPOSITION PRODUCTS:** Irritating and toxic gases may be generated by thermal decomposition or combustion.**PHYSICAL OR CHEMICAL HAZARDS:** Do not use with or store near oxidizing agents.**3. COMPOSITION/INFORMATION ON INGREDIENTS**

COMMON NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Sodium salt of Fomesafen	108731-70-0	22.05	NA	NA	NA	NA
Ammonium salt of imazethapyr	101917-66-2	5.38	NA	NA	NA	NA
Sodium hydroxide	1310-73-2	1.83	2 mg/m ³ (TWA)	2 mg/m ³	NA	NA

NA=Not applicable

4. FIRST AID MEASURES

IF IN EYES:	<ul style="list-style-type: none">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.
IF INHALED:	<ul style="list-style-type: none">Move person to fresh air.If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.Call a poison control center or doctor for further treatment advice.
IF SWALLOWED:	<ul style="list-style-type: none">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

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	<p>doctor.</p> <ul style="list-style-type: none">• Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact PROSAR at 1-887-250-9291 for emergency medical treatment information.</p> <p>Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.</p>	

5. FIRE FIGHTING MEASURES

FLASH POINT: >230°F (110°C)

FLAMMABLE LIMITS: Not applicable

AUTOIGNITION TEMPERATURE: Not applicable

EXTINGUISHING MEDIA: Foam, CO₂, dry chemical

UNUSUAL FIRE EXPLOSION AND REACTIVITY HAZARDS: None

HAZARDOUS DECOMPOSITION PRODUCTS: Irritating and toxic gases may be generated by thermal decomposition or combustion.

FIRE-FIGHTING PROCEDURES: Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent unauthorized entry to the fire area. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of waters. Dispose of in accordance with local, state, and federal regulations.

7. HANDLING AND STORAGE

Do not contaminate water, food, or feed by storage or disposal.

PRECAUTIONS TO BE TAKEN IN HANDLING: Keep out of reach of children. Follow label directions carefully. Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store product in original container only.

STORAGE TEMPERATURE (MIN/MAX): Normal ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION EQUIPMENT (PPE) ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

EYE PROTECTION: Protective eyewear (e.g. goggles or full-face shield).

SKIN PROTECTION: Wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride [PVC] OR Viton), coveralls, socks and chemical-resistant footwear.

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USER SAFETY RECOMMENDATIONS:

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

EXPOSURE GUIDELINES: Refer to Section 2.

ENGINEERING CONTROLS: Refer to product label.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear light amber liquid

ODOR: Mild

FLASH POINT: >230°F (110°C)

pH: 7.65

DENSITY: 1.110 g/cm³ @25°C (9.26 lbs/gal); 1.100 g/cm³@39°C (9.18 lbs/gal)

VISCOSITY (centipoises): 19.1 @25°C; 9.02 @39°C

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal use and storage conditions.

CONDITIONS TO AVOID: Oxidizing agents.

HAZARDOUS POLYMERIZATION: Not known to occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Irritating and toxic gases may be generated by thermal decomposition or combustion.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES:

- Acute Oral LD₅₀ (Rat): 500 – 5,000mg/kg
Acute Dermal LD₅₀ (Rat): >5,000 mg/kg
Acute Inhalation LC₅₀ (Rat): 0.5 - 2 mg/L (4-hours)
Eye Irritation (Rabbit): Severely irritating
Dermal Irritation (Rabbit): Slightly irritating
Dermal Sensitization (Guinea Pig): Not a skin sensitizer

MUTAGENICITY EFFECTS:

- Fomesafen Sodium Salt: Non-genotoxic in *in vitro* and *in vivo* assays.
Imazethapyr Ammonium: Not mutagenic.

REPRODUCTIVE/DEVELOPMENT EFFECTS:

- Fomesafen Sodium Salt: Hepatic changes and a small effect on reproductive performance seen in a 3-generation rat study at the 1000 ppm dose level. (based on Fomesafen Technical).
Imazethapyr Ammonium: Not considered to be reproductive/developmental toxic.

CHRONIC/SUBCHRONIC TOXICITY STUDIES:

Fomesafen Sodium Salt: Liver effects seen at 10 ppm and 100 ppm in 90-day rat feeding studies and in 6-month dog studies q5 25 mg/kg/day. (based on Fomesafen Technical)
No evidence of neurotoxicity from subacute or longer-term studies in mammals. (based on Fomesafen Technical)

Imazethapyr Ammonium: A 90-Day feeding study in rat had a NOEL of 10,000 ppm (500 mg/kg/day), the highest dose tested. A 1-year feeding study in Beagle dogs at dose levels of 0, 1000, 5000, or 10,000 ppm (0, 25, 125, 250 mg/kg/day) reported a NOEL of 1,000 ppm (25 mg/l).

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CARCINOGENICITY

Fomesafen Sodium Salt: Increased rates of malignant liver tumors in a 2-year mouse feeding study (1000 ppm), but the results are not considered relevant to man. (based on Fomesafen Technical).

Imazethapyr Ammonium: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. (based on imazethapyr data)

12. 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 contaminate water when disposing of equipment wash waters or rinsate. Do not apply when weather conditions favor drift from target area.

ECO-ACUTE TOXICITY:

Fomesafen:

Fish (Rainbow Trout) 96-hour LC₅₀ : 680 ppm

Invertebrate (Water Flea) Daphnia Magna 48-hour EC₅₀: 294 ppm

Bird (Mallard Duck) 14-day LD₅₀ : > 5,000 mg/kg

Imazethapyr:

Fish (Rainbow Trout) 96-hour LC₅₀ :344 mg/l

Invertebrate (Water Flea) Daphnia Magna 48-hour EC₅₀: > 110 mg/l

ENVIRONMENTAL FATE:

Fomesafen Sodium Salt: The information presented here is for the active ingredient, Fomesafen. Persistent in soil. Stable in water. Highly mobile in soil. Will leach, Sinks in water (after 24 hours).

Ammonium Imazethapyr: The formulated product does not leach through the soil. It is weakly to moderately adsorbed and is not lost from the soil through volatilization. Soil microorganisms do not appear to play a significant role in the degradation of the formulated product.

13. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL: Open dumping is prohibited. Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of Federal law. Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to Federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

CONTAINER DISPOSAL: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION

DOT CLASSIFICATION:

Not regulated

INTERNATIONAL TRANSPORTATION:

IMO (vessel): Not regulated

IATA (air): Not regulated

15. REGULATORY INFORMATION

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.

Section 311/312: Acute health hazard (immediate)
Chronic health hazard (delayed)

Section 313: Not applicable

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CERCLA RQ: 1,000 lbs. - Sodium hydroxide (CAS # 1310-58-3)

RCRA CLASSIFICATION: 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.

TSCA STATUS: The ingredients of this product are listed on the TSCA inventory or are exempt.

CA PROPOSITION 65: Not applicable

16. OTHER INFORMATION

NFPA HAZARD RATINGS	NFPA	
HEALTH:	3	0 MINIMAL
FLAMMABILITY:	1	1 SLIGHT
REACTIVITY:	0	2 MODERATE
		3 HIGH
		4 SEVERE

MSDS DATE: 1-30-13.

The information herein is given in good faith, but no warrant, express or implied, is made. Consult Makhteshim Agan of North America, Inc. for further information.