



# Safety Data Sheet

Issue Date: 30-Jan-2013

Revision Date: 03-Sept-2015

Version 2

## 1. IDENTIFICATION

### Product Identifier

**Product Name** **Torment**

### Other means of identification

**SDS #** ADAMA-010

**Registration Number(s)** EPA Reg. No. 66222-249

### Recommended use of the chemical and restrictions on use

**Recommended Use** EPA registered pesticide.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604  
1-919-256-9300

### Emergency Telephone Number

**Emergency Telephone (24 hr)** For fire, spill and/or leak contact INFOTRAC:  
1-800-535-5053 (North America) 1-352-323-3500 (International)  
For medical emergencies and health/safety inquiries, contact PROSAR:  
1-877-250-9291

## 2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

**Appearance** Clear light amber liquid

**Physical State** Liquid

**Odor** Mild

### Classification

Acute toxicity – Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

### Signal Word

**Danger**

### Hazard Statements

Harmful if inhaled  
Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Immediately call a poison center or doctor/physician  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 Immediately call a poison center or doctor/physician  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Immediately call a poison center or doctor/physician  
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Fomesafen, sodium salt	108731-70-0	22.05
Imazethapyr Ammonium	101917-66-2	5.38
Proprietary Alkaline	Proprietary	1.83

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST-AID MEASURES

**First Aid Measures**

<b>General Advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
<b>Skin Contact</b>	Take off immediately all contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. Seek medical attention.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Immediately call a poison center or doctor/physician.

<b>Ingestion</b>	Immediately call a poison center or doctor/physician. DO NOT induce vomiting. If conscious, drink 8-10 oz. of water promptly. Never give anything by mouth to an unconscious person. Obtain medical attention. Do not induce vomiting unless directed by medical personnel.
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**Most important symptoms and effects**

<b>Symptoms</b>	Causes severe skin burns and eye damage. Corrosive - causes irreversible eye damage.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Foam. Dry chemical. Foam or dry chemical systems are preferred to prevent environmental damage from excessive water runoff.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Product is not flammable.

**Hazardous Combustion Products** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

<b>Personal Precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Before responding to a spill or leak of this product, review each section of this SDS and follow the recommendations of each section.
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<b>Environmental Precautions</b>	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.
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**Methods and material for containment and cleaning up**

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so. Stop spill at source, dike area of spill to prevent spreading.
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<b>Methods for Clean-Up</b>	For small spills, absorb with sand, clay, or other inert absorbent. Place in appropriate containers for disposal. For large spills: recover free product. Dike for later disposal. Absorb with inert material and then place in suitable container for chemical waste. Wash spill area with a strong detergent and water solution; rinse with water, but minimize water use during clean-up. Do not flush to sewer. Pick up and transfer to properly labeled containers.
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## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Advice on Safe Handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Keep containers closed when not in use. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Observe precautions found on the label. Do not breathe dust/fume/gas/mist/vapors/spray.

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Store away from incompatible materials. Keep/store only in original container. Store locked up. Store at ambient conditions.

#### **Incompatible Materials**

Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Proprietary Alkaline	Ceiling: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> (vacated) Ceiling: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>

### Appropriate engineering controls

#### **Engineering Controls**

Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### Individual protection measures, such as personal protective equipment

#### **Eye/Face Protection**

Use splash goggles or face shield when contact may occur.

#### **Skin and Body Protection**

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Viton or other impervious gloves are required. Long sleeve shirt, trousers, and safety shoes.

#### **Respiratory Protection**

Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.

#### **General Hygiene Considerations**

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Wash at the end of each work shift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles. Launder or discard contaminated clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid	<b>Odor</b>	Mild
<b>Appearance</b>	Clear light amber liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Light amber Clear		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	7-8	
<b>Melting Point/Freezing Point</b>	Not determined	
<b>Boiling Point/Boiling Range</b>	Not determined	
<b>Flash Point</b>	> 110 °C / > 230 °F	
<b>Evaporation Rate</b>	Not determined	
<b>Flammability (Solid, Gas)</b>	Liquid-not applicable	
<b>Upper Flammability Limits</b>	Not applicable	
<b>Lower Flammability Limit</b>	Not applicable	
<b>Vapor Pressure</b>	Not determined	
<b>Vapor Density</b>	Not determined	
<b>Specific Gravity</b>	Not determined	
<b>Water Solubility</b>	Not determined	
<b>Solubility in other solvents</b>	Not determined	
<b>Partition Coefficient</b>	Not determined	
<b>Auto-ignition Temperature</b>	Not determined	
<b>Decomposition Temperature</b>	Not determined	
<b>Kinematic Viscosity</b>	Not determined	
<b>Dynamic Viscosity</b>	19.1 centipoise @ 25°C; 9.02 centipoise @ 39°C	
<b>Explosive Properties</b>	Not determined	
<b>Oxidizing Properties</b>	Not determined	
<b>Bulk Density</b>	1.110 g/cm <sup>3</sup> @ 25°C (9.26 lb/gal); 1.100 g/cm <sup>3</sup> @ 39°C (9.18 lb/gal)	

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

<b>Hazardous Polymerization</b>	Not known to occur.
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### Conditions to Avoid

Contact with incompatible materials. Keep out of reach of children. Excessive heat and freezing temperature. See Sec. 7 Handling & Storage.

### Incompatible Materials

Strong oxidizing agents.

### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Causes severe eye damage.
<b>Skin Contact</b>	Causes severe skin burns.
<b>Inhalation</b>	Harmful if inhaled.
<b>Ingestion</b>	Do not taste or swallow.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Proprietary Alkaline	-	= 1350 mg/kg ( Rabbit )	-

### Information on physical, chemical and toxicological effects

**Symptoms** Please see section 4 of this SDS for symptoms.

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

**Carcinogenicity** Not classifiable as a human carcinogen.

### Numerical measures of toxicity

Not determined

### Product Information (Numerical measures of toxicity)

**Acute Oral LD50 (Rat):** 500- 5,000 mg/kg  
**Acute Dermal LD50 (Rabbit):** >5,050 mg/kg  
**Acute Inhalation LC50 (Rat):** 0.5- 2 mg/L (4-hr)  
**Eye Irritation:** Severely irritating.  
**Dermal Irritation:** Slightly irritating.  
**Dermal Sensitization:** Not a skin sensitizer.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

For terrestrial uses only. 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 water or rinsate. Do not clean equipment or dispose of equipment wash waters in a manner that will contaminate water sources.

### Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Proprietary Alkaline		45.4: 96 h Oncorhynchus mykiss mg/L LC50 static		

### Persistence/Degradability

Not determined.

### Bioaccumulation

Not determined.

### Mobility

When released into the soil, this material may leach into the groundwater Highly mobile

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods****Disposal of Wastes**

Do not contaminate water, food, or feed by storage or disposal. END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS. PRODUCT DISPOSAL: Pesticide spray mixture or rinsate that cannot be used should be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

Chemical Name	California Hazardous Waste Status
Proprietary Alkaline	Toxic Corrosive

**14. TRANSPORT INFORMATION****DOT**

Not regulated.

**IATA**

**UN/ID No** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, N.O.S. (Fomesafen, Imazethapyr)  
**Hazard Class** 9  
**Packing Group** III  
**Marine Pollutant** Yes

**IMDG**

**UN/ID No** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, N.O.S. (Fomesafen, Imazethapyr)  
**Hazard Class** 9  
**Packing Group** III  
**Marine Pollutant** Yes

**15. REGULATORY INFORMATION****International Inventories**

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Proprietary Alkaline	Present	X		Present		Present	X	Present	X	X

**Legend:**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

*AICS - Australian Inventory of Chemical Substances*

**US Federal Regulations****CERCLA**

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Proprietary Alkaline	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

**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

**SARA 313**

Not determined

**CWA (Clean Water Act)**

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Proprietary Alkaline	1000 lb			X

**US State Regulations****U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Proprietary Alkaline	X	X	X

**EPA Pesticide Registration Number** 66222-249**EPA Statement**

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:

**EPA Pesticide Label**

Signal Word: Danger

This product contains fomesafen which has been determined to cause tumors in laboratory animals (mice). Risks can be reduced by closely following use directions and precautions and by wearing the protective clothing specified elsewhere on this label.

Causes irreversible eye damage. Harmful if inhaled. Harmful if swallowed. Do not get in eyes or on clothing. Do not breathe spray mist. Wash 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 reuse. Wear: Goggles or face shield, long-sleeved shirt and long pants, socks, shoes,

**Difference between SDS and EPA pesticide label**

	EPA	OSHA
<b>Signal Word</b>	Danger	Danger
Acute toxicity - Oral	Harmful if swallowed	N/A
Acute toxicity - Inhalation	Harmful if inhaled	Harmful if inhaled
Skin corrosion/irritation	N/A	Causes severe skin burns
Serious eye damage/eye irritation	Causes irreversible eye damage	Causes severe eye damage



<b>16. OTHER INFORMATION</b>
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<b><u>NFPA</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	3	1	0	None
<b><u>HMIS</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	3	1	0	See section 8

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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**