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Revision Number 3

# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product Identifier

Product Name **Predator™ Herbicide**

### Other means of identification

Product Code 2123410  
CAS Number MIXTURE  
Formula C15H19N3O3.NH(4)  
Synonyms Imazethapyr ammonium  
EPA Registration Number 2749-632

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

**Recommended Use** Agricultural Intermediate  
**Uses advised against** Do not use where contact with food or drinking water is possible. Avoid prolonged contact with eyes, skin, and clothing.

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

**Supplier Address** ACETO US, LLC  
4 Tri Harbor Court  
Port Washington, NY 11050-4661  
Phone: (516) 627-6000  
Fax: (516) 627-6093  
Email: actylis@actylis.com

### Emergency telephone number(s)

ChemTrec: 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

### Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Chronic aquatic toxicity	Category 1
Acute aquatic toxicity	Category 3
Flammable liquids	Category 4

### Label elements

#### Emergency Overview

#### Signal Word

**Warning**

#### Hazard statements

Harmful if inhaled  
Combustible liquid  
Toxic to aquatic life with long lasting effects

**Appearance**

Transparent Light Amber liquid

**Physical State**

Liquid

**Odor**

Bitter

**Precautionary Statements - Prevention**

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

Use only outdoors or in a well-ventilated area

Keep away from heat/sparks/open flames/hot surfaces. — No smoking

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician if you feel unwell

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None known

**Other Information**

No information available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms** Imazethapyr ammonium

**Formula** C<sub>15</sub>H<sub>19</sub>N<sub>3</sub>O<sub>3</sub>.NH(4)

Chemical name	CAS No.	Weight-%	North American Hazard Indicator
Imazethapyr	81335-77-5	22.87	False
Ammonium hydroxide	1336-21-6	0.1 - 3.0	False
Other Ingredients	N/A	74.13 - 77.03	False

### 4. FIRST AID MEASURES

**First Aid Measures**

**General Advice** Show this safety data sheet to the doctor in attendance.

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.

<b>Skin Contact</b>	Wash off immediately with plenty of water. Wash contaminated clothing before reuse. Consult a physician.
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Consult a physician.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Self-Protection of the First Aider</b>	Use personal protective equipment as required. Avoid contact with eyes, skin and clothing.
<b><u>Most important symptoms and effects, both acute and delayed</u></b>	
<b>Signs and Symptoms</b>	No information available.
<b><u>Indication of any immediate medical attention and special treatment needed</u></b>	
<b>Notes to Physician</b>	Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

<b><u>Suitable Extinguishing Media</u></b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b><u>Unsuitable Extinguishing Media</u></b>	No information available.
<b><u>Hazardous Combustion Products</u></b>	Thermal decomposition or combustion may produce hazardous gases and/or materials.
<b><u>Explosion Data</u></b>	Not available
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Sensitivity to static discharge</b>	Not available.

### **Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition.

### **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.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures**

<b>Personal Precautions</b>	Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment as required. Avoid contact with eyes, skin and clothing. In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Environmental Precautions</b>	Local authorities should be advised if significant spillages cannot be contained. Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

### **Methods and material for containment and cleaning up**

<b>Methods for Clean-up</b>	Pick up and transfer to properly labelled containers.
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## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Handling** Use only in an area equipped with a safety shower. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation. Do not breathe vapours/dust. Avoid contact with eyes, skin and clothing. Avoid repeated exposure.

### Conditions for safe storage, including any incompatibilities

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

**Incompatible Materials** Incompatible with oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium hydroxide 1336-21-6	25 ppm TWA 35 ppm STEL	TWA: 50 ppm TWA: 35 mg/m <sup>3</sup> (vacated) STEL: 35 ppm (vacated) STEL: 27 mg/m <sup>3</sup>	300 ppm IDLH
Imazethapyr 81335-77-5	-	-	-
Other Ingredients N/A	-	-	-

### Appropriate engineering controls

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

**Eye/Face Protection** Tight sealing safety goggles.

**Skin and body protection** Use suitable eye protection and gloves.

**Respiratory Protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Appearance** Transparent Light Amber liquid

**Physical State** Liquid

**Odor** Bitter

**Odor Threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	6.0 (1% solution)	
<b>Melting point / Freezing point</b>	No Data Available	Literary Reference
<b>Boiling point / boiling range</b>	No information available	
<b>Flash Point</b>	No Data Available	No information available
<b>Evaporation Rate</b>	No information available	

<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>	No information available	
<b>Upper flammability limit</b>	No information available	
<b>Lower flammability limit</b>	Not available	
<b>Vapor Pressure</b>	No information available	
<b>Vapor Density</b>	Not available	
<b>Specific Gravity</b>	No information available	
<b>Water Solubility</b>	No information available	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient: n-octanol/water</b>	Not available	
<b>Autoignition temperature °C</b>	No Data Available	Estimated
<b>Decomposition temperature</b>	No Data Available	
<b>Kinematic Viscosity</b>	No information available	
<b>Dynamic Viscosity</b>	Not available	
<b>Explosive Properties</b>	No information available	
<b>Oxidizing Properties</b>	No information available	

**Other Information**

<b>Softening Point</b>	No information available
<b>Molecular Weight</b>	No information available
<b>VOC content</b>	No information available
<b>Liquid Density</b>	1.120 g/cm <sup>3</sup> @ 24C
<b>Bulk density</b>	No information available
<b>Corrosion characteristics</b>	No information available

**10. STABILITY AND REACTIVITY**

<b>Reactivity</b>	Not applicable.
<b>Chemical Stability</b>	Stable under recommended storage conditions
<b>Conditions to Avoid</b>	Heat, flames and sparks.
<b>Incompatible Materials</b>	Incompatible with oxidizing agents.
<b>Hazardous Decomposition Products</b>	No information available.
<b>Possibility of Hazardous Reactions</b>	None under normal processing

**11. TOXICOLOGICAL INFORMATION****Product Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Imazethapyr	>5,000 mg/kg (Rat)	>5,000 mg/kg (Rabbits)	> 2.67 mg/L (Rat)
Ammonium hydroxide	= 350 mg/kg ( Rat )	-	rat, LC50: 2000 ppm/4-hr (based on Ammonia)
Other Ingredients	-	-	-

The following values are calculated based on chapter 3.1 of the GHS document

Information on likely routes of exposure

<b>Eyes</b>	Avoid contact with eyes.
<b>Skin</b>	Avoid contact with skin.
<b>Inhalation</b>	Avoid breathing vapors or mists.

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** No information available.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Ammonium hydroxide 1336-21-6	-	-	-	-
Imazethapyr 81335-77-5	-	-	-	-
Other Ingredients N/A	-	-	-	-

**Serious eye damage/irritation** No information available.

**Skin Corrosion/Irritation** No information available.

**Sensitization** No information available.

**Reproductive Effects** No information available.

**Mutagenic Effects** No information available.

**Developmental Effects** No information available.

**STOT - single exposure** No information available.

**STOT - Repeated Exposure** No information available.

**Aspiration Hazard** No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Toxic to aquatic life with long lasting effects  
Avoid release to the environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Imazethapyr 81335-77-5	EC50 (96 h) 21.5 mg/l, Anabaena flos-aquae (static)	LC50 (96 h) > 112 mg/l, Oncorhynchus mykiss; LC50 (96 h) > 110 mg/l, Lepomis macrochirus	-	-
Ammonium hydroxide 1336-21-6	-	8.2: 96 h Pimephales promelas mg/L LC50	-	= 0.66 mg/L EC50 0.66: 48 h Daphnia pulex mg/L EC50 0.66: 48 h water flea mg/L EC50
Other Ingredients N/A	-	-	-	-

**Persistence/Degradability** Not readily biodegradable.

**Bioaccumulation/Accumulation** No information available.

**Mobility in Soil** No information available.

Chemical name	log Pow =
Imazethapyr 81335-77-5	-
Ammonium hydroxide 1336-21-6	-
Other Ingredients N/A	-

**Other adverse effects** No information available

### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

**Disposal Methods** Contact waste disposal services. Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. TRANSPORT INFORMATION

**DOT** Not regulated

#### TDG

**UN-No** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.  
**Hazard class** 9  
**Packing Group** III  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Imazethapyr), 9, III

#### MEX

**UN-No** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.  
**Hazard class** 9  
**Packing Group** III  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Imazethapyr), 9, III

#### ICAO

**UN-No** UN3082  
**Proper Shipping Name** Consumer commodity  
**Hazard class** 9  
**Packing Group** III  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Imazethapyr), 9, III

#### IATA

**UN number** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.  
**Transport hazard class(es)** 9  
**Packing Group** III  
**ERG Code** 171  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Imazethapyr), 9, III

**IMDG**

**UN number** UN3082  
**Proper Shipping Name** Consumer commodity  
**Transport hazard class(es)** 9  
**Packing Group** III  
**EmS No.** F-A, S-F  
**Marine Pollutant** This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Imazethapyr), 9, III, Marine Pollutant

**RID**

**UN-No** UN3082  
**Proper Shipping Name** Consumer commodity  
**Transport hazard class(es)** 9  
**Packing Group** III  
**Classification Code** M6  
**Description** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Imazethapyr), 9, III  
**ADR/RID-Labels** 9

**ADR**

**UN-No** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.  
**Hazard Class** 9  
**Packing Group** III  
**Classification Code** M6  
**Tunnel Restriction Code** (-)  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Imazethapyr), 9, III, (-)  
**Labels** 9

**ADN**

**UN Number** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s.  
**Transport hazard class(es)** 9  
**Packing Group** III  
**Classification Code** M6  
**Special Provisions** 274, 335, 375, 601  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Imazethapyr), 9, III  
**Hazard label(s)** 9  
**Limited Quantity** 5 L  
**Equipment Requirements** PP

**15. REGULATORY INFORMATION**

International Inventories

**TSCA** Does not comply  
**Canada (DSL)** Does not comply  
**EU (EINECS)** Does not comply  
**EU (ELINCS)** Does not comply  
**Japan (ENCS)** Does not comply  
**China (IECSC)** Does not comply  
**Korea (KECL)** Does not comply  
**Philippines (PICCS)** Does not comply  
**Australia (AICS)** Does not comply  
**Mexico INV** Does not comply  
**Taiwan INV** Does not comply

Chemical name	U.S.A. (TSCA)	Canada (DSL)	EU (EINECS)	EU (ELINCS)
Imazethapyr	-	-	-	-



Ammonium hydroxide	Present	Present	X	-
Other Ingredients	-	-	-	-
<b>Component</b>	<b>Japan (ENCS)</b>	<b>China (IECSC)</b>	<b>Korea (KECL)</b>	<b>Philippines (PICCS)</b>
-	-	Present	-	-
-	Present (1)-314	Present	Present	Present
-	-	-	-	-
<b>Chemical name</b>	<b>Mexico INV</b>		<b>Taiwan INV</b>	
Imazethapyr 81335-77-5	-		Present	
Ammonium hydroxide 1336-21-6	Present		Present	
Other Ingredients N/A	-		-	

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. 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 by Safety Data Sheets, and for workplace labels of non-pesticide chemicals.

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

Component	SARA 313 - Threshold Values
Ammonium hydroxide 1336-21-6 ( 0.1 - 3.0 )	1.0 % de minimis concentration (10% of total aqueous Ammonia is reportable under this listing)

**SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any HAPs.

**VOC content**

This Product does not contain any VOCs

**CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
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Imazethapyr 81335-77-5	-	-	-	-
Ammonium hydroxide 1336-21-6	-	-	-	-
Other Ingredients N/A	-	-	-	-

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	CERCLA/SARA Hazardous Substances	CERCLA/SARA RQ	RQ
Imazethapyr 81335-77-5	-	-	-
Ammonium hydroxide 1336-21-6	1000 lb final RQ; 454 kg final RQ 100 lb final RQ; 45.4 kg final RQ	-	1000 lb final RQ; 454 kg final RQ
Other Ingredients N/A	-	-	-

## State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

This product contains the following State Right-to-Know chemicals:

Chemical name	New Jersey	Massachusetts	Illinois	Rhode Island	Pennsylvania
Imazethapyr 81335-77-5	-	-	-	-	-
Ammonium hydroxide 1336-21-6	sn 0103	Present	-	-	Environmental hazard
Other Ingredients N/A	-	-	-	-	-

**U.S. EPA Label Information**

EPA Pesticide Registration Number 2749-632

## Canada

**WHMIS Statement**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (SOR/2015-17) and the SDS contains all the information required by SOR/2015-17.

<b>16. OTHER INFORMATION</b>
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**NFPA**

Health 2

Flammability 1

Instability 0

Physical Hazard 0



**Issuing Date** 15-Feb-2022  
**Revision Date** 06-Jul-2023  
Not available

**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**