

# Material Safety Data Sheet

Product Name: **STRONGHOLD Plant Growth Regulator**

MSDS No.: 641-8

Version No.: 006

EPA Registration No.: 2217-802

## 1. Basic Information:

**Manufacturer:** PBI/Gordon Corporation  
**Address:** 1217 West 12th Street  
**City, State Zip:** Kansas City, MO 64101-1407  
**Information Contact:** Environmental, Health, & Safety Dept.  
**Information Telephone Number:** (816)421-4070  
**Emergency Contact:** Chemtrec  
**Emergency Telephone Number:** (800)424-9300



1	Health
1	Flammability
0	Reactivity
B	Pers. Protection

**Last Update:** 11/21/00

**Chemical State:**  Liquid  Gas  Solid  
**Chemical Type:**  Pure  Mixture

## 2. Ingredients:

Trade Secret (ND = Not Disclosed)

CAS No.	Chemical Name	% Range	EHS		IARC		SARA 313		OSHA PEL	ACGIH TLV	Other Limits
			NTP		SUB Z						
0	Ammonium salt of Imazapyr [2-[4,5-Dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1-H-imidazol-2-yl]-3-pyridinecarbonylic acid]]	0.15%	N	N	N	N	N	NI	NI	NI	NI
101917662	Ammonium salt of Imazethapyr [(+/-)-2-[4,5-Dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1-H-imidazol-2-yl]-5-ethyl-3-pyridinecarbonylic acid]]	4.09%	N	N	N	N	N	NI	NI	NI	NI
53780362	Diethanolamine salt of mefluidide (N-[2,4-dimethyl-5-[[trifluoromethyl)-sulfonyl] amino] phenyl] acetamide)	21.45%	N	N	N	N	N	NI	NI	NI	NI

## 3. Hazardous Identification:

**Hazard Category:**

Acute  Chronic  Fire  Pressure  Reactive

**Hazardous Identification Information:**

Dark brown liquid; slightly musty odor.

## 4. First Aid Measures:

**Route(s) of Entry:**

Contact, inhalation, ingestion.

**Health Hazards (Acute and Chronic):**

EYES: Contact may cause irritation and/or burning.

SKIN: Contact may cause irritation. May be harmful if absorbed through the skin.

INHALATION: May irritate respiratory system.

INGESTION: May irritate gastrointestinal system.

**Signs and Symptoms:**

NI

**Medical Conditions Generally Aggravated by Exposure:**

NI

**Emergency First Aid Procedure:**

IF SWALLOWED: Drink one or two glasses of water and induce vomiting by touching back of throat with finger if the patient is conscious. Get medical attention.

## First Aid Measures (Continued)

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

IF INHALED: Remove victim to fresh air.

IF ON SKIN: Wash thoroughly with soap and water. Get medical attention if irritation persists.

**Other Health Warnings:**

NI

## 5. Fire Fighting Measures:

**Flash Point:** >101°F **F.P. Method:**

**Lower Explosive Limit:** NI

**Upper Explosive Limit:** NI

**Fire Extinguishing Media:**

Foam, CO<sub>2</sub>, dry chemical, water. The low flash point of this product is due to a minor component in the mixture. Based on independent laboratory testing of similar products, this product would not sustain combustion as specified in DOT Regulation 49 CFR 173 Appendix H, and, therefore, would not be classified as a combustible liquid.

**Special Fire Fighting Procedures:**

Wear self-contained positive-pressure breathing apparatus and full protective clothing.

**Unusual Fire and Explosion:**

Run-off from fire control may pollute surface water; call local authorities if pollution occurs.

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## 6. Accidental Release Measures:

### Steps to be Taken in Case Material is Released or Spilled:

Do not touch spilled product. See Section 8 for Personal Protective Equipment. Contain and collect spilled material with inert absorbent; place in drums for disposal. Cover and label the drums. Wash area with water, if possible.

## 7. Handling and Storage:

### Precautions to be Taken:

Keep from children and domestic animals. Store product in original container in a locked storage area. Do not reuse empty container. Do not store near food or feed, to prevent cross-contamination. Keep from freezing.

### Other Precautions:

NI

## 8. Exposure Controls/Personal Protection:

### Ventilation Requirements:

Mechanical ventilation is recommended if product is applied in an enclosed area. Good local ventilation is required.

### Personal Protective Equipment:

PROTECTIVE CLOTHING: Wear long sleeve shirt, long pants, shoes with socks, and chemical-resistant gloves.

EYE PROTECTION: Safety glasses with side shields or safety goggles.

RESPIRATORY PROTECTION: If exposure limits may be exceeded, wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P or HE filter.

## 9. Physical and Chemical Properties:

Boiling Point: NI

Melting Point: NI

Evaporation Rate (Butyl Acetate = 1): NI

Vapor Pressure (mm Hg.): NI

Vapor Density (Air = 1): NI

Specific Gravity (H<sub>2</sub>O = 1): 1.09032

Solubility in Water: Soluble

Appearance and Odor: Dark brown liquid; musty odor

### Other Information:

pH: 7.5-9.0

Density: 9.09 pounds/gallon

Viscosity: <5.0 centipoise

## 10. Stability and Reactivity:

### Stability:

Stable.

### Incompatibility (Materials to Avoid):

This product will form a precipitate with acids.

### Decomposition/By-Products:

Burning may produce oxides of carbon and nitrogen.

### Hazardous Polymerization:

Will not occur.

## 11. Toxicological Information:

Dermal LD50: >2000 mg/kg body weight.

## Toxicological Information (Continued)

Inhalation LC50 (4H): >5.1 mg/L air.

Oral LD50: >5000 mg/kg body weight.

## 12. Ecological Information:

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 washwaters. Do not allow spray to drift onto nontarget crops or vegetation.

## 13. Disposal Considerations:

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

CONTAINER DISPOSAL: For Plastic Containers - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities by burning. If burned, stay out of smoke.

Dispose of product, contaminated absorbent and waste water according to local, state and Federal regulations.

## 14. Transport Information:

The following guidelines apply for domestic ground transport. If shipping by air or ocean, please contact our Transportation Dept.

Freight Class: Plant Growth Regulators - NMFC #101685

In our current available sizes, this product does not qualify as a Hazardous Material.

## 15. Regulatory Information:

OSHA STATUS: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS: This product is exempt from TSCA Regulation under FIFRA Section 3(2)(B)(ii) when used as a pesticide.

CERCLA REPORTABLE QUANTITY: None

### SARA TITLE III:

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: None

SECTION 311/312 HAZARD CATEGORIES: Immediate Health Hazard, Delayed Health Hazard

SECTION 313 TOXIC CHEMICALS: None

RCRA STATUS: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, 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. (40 CFR 261.20-24)

## 16. Other Information:

REASON FOR ISSUE: To revise MSDS to the ANSI Z400.1-1998 format

NOTE: NI means not indicated.

The information and statements in this Material Safety Data Sheet are believed to accurately reflect the scientific evidence used in making the hazard determination, but is not to be construed as a warranty or representation for which we assume legal responsibility. Additional information may be necessary or desirable depending on particular,

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## Other Information (Continued)

exceptional or variable conditions or circumstances of use or storage or because of locally applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information available to you and must make independent determinations of the suitability of the information for your particular circumstances or conditions and of the completeness of the information available from all sources to assure both the proper use of the material described herein and the safety and health of employees.