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Version 4

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

**Product identifier**

**Product Name** SURGE® Broadleaf Herbicide for Turf

**Other means of identification**

**Product Code** PBI FP 655-6

**EPA Pesticide Registration Number** 2217-867

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

**Recommended Use** Herbicide.

**Uses advised against** No information available.

**Details of the supplier of the safety data sheet**

**Supplier**

PBI Gordon Corporation  
 1217 West 12th Street  
 Kansas City, MO 64101

**Manufacturer**

PBI Gordon Corporation  
 1217 West 12th Street  
 Kansas City, MO 64101

**Company Name**

PBI Gordon Corporation  
 1217 West 12th Street  
 Kansas City, MO 64101

**Emergency telephone number**

**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Classification**

**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute Oral Toxicity	Category 4
Serious eye damage/eye irritation	Category 1
Skin Sensitization	Category 1
Chronic Aquatic Toxicity	Category 3
Flammable liquids	Category 3

**Label elements**

**Emergency Overview**

**Danger**

**Hazard statements**

Harmful if swallowed. Causes serious eye damage. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

Flammable liquid and vapor.



**Appearance** Liquid

**Physical state** Liquid

**Odor** Amines

**Precautionary Statements - Prevention**

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Wear protective gloves/protective clothing/eye protection/face protection
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Contaminated work clothing should not be allowed out of the workplace
- Avoid release to the environment
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- Keep container tightly closed

**Precautionary Statements - Response**

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If skin irritation or rash occurs: Get medical advice/attention
- Wash contaminated clothing before reuse
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth
- 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)**

Have the product label with you when calling a poison control center or doctor or going in for treatment. You may also contact 1-877-800-5556 for emergency medical treatment advice.

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; however OSHA HCS 2012 flammable classifications are solely based on tested mixture flash points and boiling points.

**Other Information****3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS. Number	Weight %
2,4-D, dimethylamine salt	2008-39-1	18.79
MCCP-p Dimethylamine Salt	66423-09-4	6.8
Dimethylamine dicamba	2300-66-5	3.02
Sulfentrazone	122836-35-5	0.67

\* The exact percentage (concentration) of composition has been withheld as a trade secret

**4. FIRST AID MEASURES****First aid measures****General advice**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.

**Eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

**Ingestion** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.

**Self-protection of the first aider** Use personal protective equipment as required.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically. May cause sensitization of susceptible persons.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

**Specific hazards arising from the chemical**

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**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**

**Personal precautions** Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions**

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

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

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material. Prevent product from entering drains. After cleaning, flush away traces with water. Pick up and transfer to properly labeled containers. Dam up. Take up mechanically, placing in appropriate containers for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Use personal protective equipment as required. Ensure adequate ventilation, especially in

confined areas. Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

**Incompatible materials** Incompatible with strong acids and bases. Incompatible with oxidizing agents.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2,4-D, dimethylamine salt 2008-39-1	TWA: 10 mg/m <sup>3</sup> inhalable fraction S*	TWA: 10 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> , TWA: 10 mg/m <sup>3</sup>

NIOSH IDLH *Immediately Dangerous to Life or Health*

**Other Information** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls**

**Engineering Controls** Local and General Ventilation.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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

**Eye/face protection** Tight sealing safety goggles. Face protection shield.

**Skin and body protection** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid	<b>Odor</b>	Amines
<b>Appearance</b>	Liquid	<b>Odor threshold</b>	No information available
<b>Color</b>	Brown		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.5-9.0	
Melting point/freezing point	<35 °F	
Boiling point / boiling range	100 °C / 212 °F	

<b>Flash point</b>	57 °C / 135 °F	Pensky-Martens Closed Cup (PMCC)
<b>Evaporation rate</b>	< 1	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>	No information available	
<b>Lower flammability limit:</b>	No information available	
<b>Vapor pressure</b>	<17 mm Hg	
<b>Vapor density</b>	>1	
<b>Specific Gravity</b>	1.097	
<b>Water solubility</b>	Soluble in water	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Oxidizing properties</b>	No information available	

**Other Information**

**Density** 9.13 pounds/gallon

## 10. STABILITY AND REACTIVITY

**Reactivity**

No data available

**Chemical stability**

Stable.

**Possibility of Hazardous Reactions**

None under normal processing.

**Hazardous polymerization**

Will not occur.

**Conditions to avoid**

Exposure to air or moisture over prolonged periods. Keep from freezing.

**Incompatible materials**

Incompatible with strong acids and bases. Incompatible with 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**

**Inhalation** Irritant, moderate respiratory.

**Eye contact** Severely irritating to eyes.

**Skin Contact** Moderate skin irritation.

**Ingestion** May cause irritation.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2,4-D, dimethylamine salt 2008-39-1	= 625 mg/kg ( Rat )	= 2115 mg/kg ( Rabbit )	-
Dimethylamine dicamba 2300-66-5	= 1267 mg/kg ( Rat ) = 2629 mg/kg ( Rat )	> 2 g/kg ( Rabbit )	-
Sulfentrazone	> 2855 mg/kg ( Rat )	-	-

122836-35-5			
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**Information on toxicological effects**

**Symptoms** No information available.

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

**Sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** The International Agency for Research on Cancer (IARC) lists chlorophenoxy herbicides in its Group 2B (limited evidence for Carcinogenicity in humans.) The US EPA has given the chlorophenoxy Herbicides 2,4-D, 2,4-DP, MCP, and MCPA a Class D classification (not classifiable as to human carcinogenicity.) More current 2,4-D lifetime feeding studies in rats and mice did not show carcinogenic effects and a recent World Health Organization (WHO) review of 2,4-D toxicology has concluded that 2,4-D is not a carcinogen. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
2,4-D, dimethylamine salt 2008-39-1		Group 2B		
MCP-p Dimethylamine Salt 66423-09-4		Group 2B		

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

**Reproductive toxicity** No information available.

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

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

**Chronic toxicity** Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects. Repeated contact may cause allergic reactions in very susceptible persons.

**Target Organ Effects** Eyes, Respiratory system, Skin.

**Aspiration hazard** No information available.

**Numerical measures of toxicity - Product Information**

**Unknown Toxicity** 7 % of the mixture consists of ingredient(s) of unknown toxicity

**Oral LD50** < 2000 mg/kg

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

**ATEmix (dermal)** 30209 mg/kg

**ATEmix (inhalation-gas)** 5422 mg/L

**ATEmix (inhalation-dust/mist)** 11.6 mg/L

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Harmful to aquatic life with long lasting effects

8% of the mixture consists of components(s) of unknown hazards to the aquatic environment

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

<b>Disposal of wastes</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Do not reuse container.
<b>US EPA Waste Number</b>	U240 D001 <i>See Section 2: Hazards not otherwise classified (HNOC)</i>

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

<b>Proper shipping name</b>	For package sizes less than 58.29 gallons: product is non-regulated.  For package sizes 58.29 gallons or greater: UN3082, Environmentally Hazardous Substances, Liquid, N.O.S., 9, PGIII, RQ (2,4-D)
<b>Description</b>	The following guidelines apply for domestic ground transport. If shipping by air or ocean, please contact our Transportation Dept.  PESTICIDES, NOI, INCLUDING DEFOLIANTS, FUNGICIDES, HERBICIDES, OR INSECTICIDES NMFC 155050-6  If shipped in bulk containers (greater than 119 gallons), this product is a Marine Pollutant.  When shipped as a Hazardous Material, label required is Class 9 (Miscellaneous). Placards required on bulk shipments only.

**15. REGULATORY INFORMATION****U.S. EPA Label Information****EPA Pesticide Registration Number** 2217-867**Federal Insecticide, Fungicide, Rodenticide Act Regulations**

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**

Hazards to Humans and Domestic Animals:

Danger. Keep out of the reach of children. Corrosive. Causes irreversible eye damage. Do not get in eyes, on skin or on clothing. Harmful if absorbed through skin or if swallowed.

Environmental Hazards:

This pesticide may be toxic to fish and aquatic invertebrates and may adversely affect non-target plants. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

**International Inventories**

<b>TSCA</b>	Not Listed
<b>DSL/NDSL</b>	Not Listed
<b>EINECS/ELINCS</b>	Not Listed
<b>ENCS</b>	Not Listed
<b>IECSC</b>	Not Listed
<b>KECL</b>	Not Listed
<b>PICCS</b>	Not Listed

AICS Not Listed

**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

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
2,4-D, dimethylamine salt				X			X		X	X
Dimethylamine dicamba				X		X				X

**US 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

Chemical Name	SARA 313 - Threshold Values %
Dimethylamine dicamba - 2300-66-5	1.0

**SARA 311/312 Hazard Categories**

- Acute health hazard Yes
- Chronic Health Hazard Yes
- Fire hazard Yes
- Sudden release of pressure hazard No
- Reactive Hazard No

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**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	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
2,4-D, dimethylamine salt 2008-39-1	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

**US State Regulations**

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Dimethylamine dicamba 2300-66-5	X		

**International Regulations**

Mexico - Grade Moderate risk, Grade 2

**16. OTHER INFORMATION**



<u>NFPA</u>	Health hazards 3	Flammability 1	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 3	Flammability 1	Physical hazards 0	Personal protection X

**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of PBI Gordon Corporation's knowledge, information and belief at the date of this publication. The information given is designed only as 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 other process, unless specified in the text. PBI GORDON CORPORATION MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. Each user is also responsible for evaluating the conditions of use and designing the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. PBI Gordon Corporation assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

**End of Safety Data Sheet**