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Revision Date 23-Jan-2020

Version 3

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

Product identifier.

Product Name KATANA® Turf Herbicide

Other means of identification

Product Code PBI FP 5513076

EPA Pesticide Registration Number 71512-12-2217

Product Size 4/5 U. S. Oz.

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 Address

PBI-Gordon Corporation
P.O. Box 860350
Shawnee, KS 66286

Company Name

PBI-Gordon Corporation
P.O. Box 860350
Shawnee, KS 66286

Manufacturer

PBI-Gordon Corporation
P.O. Box 860350
Shawnee, KS 66286

Emergency telephone number

24 Hour Emergency Phone Number 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)

Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 2
Acute Aquatic Toxicity	Category 1
Chronic Aquatic Toxicity	Category 1

Label elements

Emergency Overview

Signal word

Danger

Hazard statements

- May cause cancer
- May cause damage to organs through prolonged or repeated exposure
- Very toxic to aquatic life with long lasting effects



Appearance Granules

Physical state Solid

Odor Pleasant

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water
 Call a POISON CENTER or doctor/physician if you feel unwell
 Wash contaminated clothing before reuse
 IF ON SKIN: Wash with plenty of water and soap
 Take off contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other information**

Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS-No	Weight-%
Silica	7631-86-9	0-25%
Flazasulfuron	104040-78-0	25

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

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. If symptoms persist, call a physician.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician.
Inhalation	Remove to fresh air. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Wear personal protective clothing (see section 8).

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 Treat symptomatically.

5. FIRE-FIGHTING MEASURES

<u>Suitable Extinguishing Media</u>	Carbon dioxide (CO ₂). Foam. Dry chemical. Water.
<u>Unsuitable extinguishing media</u>	No information available.
<u>Specific hazards arising from the chemical</u>	In the event of fire and/or explosion do not breathe fumes. Thermal decomposition can lead to release of irritating and toxic gases and vapors.
<u>Explosion data</u>	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
<u>Special protective equipment for fire-fighters</u>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

<u>Personal precautions, protective equipment and emergency procedures</u>	
Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.
<u>Environmental precautions</u>	
Environmental precautions	Prevent further leakage or spillage if safe to do so Prevent product from entering drains See Section 12 for additional ecological information Avoid release to the environment Collect spillage Dispose of contents/container to an approved waste disposal plant
Other information	Refer to protective measures listed in Sections 7 and 8.
<u>Methods and material for containment and cleaning up</u>	
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust.

7. HANDLING AND STORAGE

<u>Precautions for safe handling</u>	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco.
<u>Conditions for safe storage, including any incompatibilities</u>	
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep in properly labeled containers. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silica	No data available	TWA: 50 µg/m ³ excludes	IDLH: 3000 mg/m ³

7631-86-9		construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 6 mg/m ³ <1% Crystalline silica TWA: 20 mppcf : (80)/(% SiO ₂) mg/m ³ TWA	TWA: 6 mg/m ³
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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 Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Chemical resistant gloves.

Skin and body protection Wear long-sleeved shirt, long pants, socks and shoes.

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 Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Solid
Appearance Granules
Color Light brown
Odor Pleasant
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5.5	1% solution@ 25 °C
Melting point/freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	0.79	
Water solubility	Partially soluble	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known

Other Information

Liquid Density 49.3 pounds/cubic foot
Bulk density No information available

10. STABILITY AND REACTIVITY

Reactivity

None known.

Stability

Stable under recommended storage conditions

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

Will not occur.

Conditions to avoid

Keep out of reach of children.

Incompatible materials

None known based on information supplied.

Hazardous decomposition products

May emit toxic fumes under fire conditions.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Inhalation Specific test data for the substance or mixture is not available.
Eye contact Specific test data for the substance or mixture is not available.
Skin contact Specific test data for the substance or mixture is not available.
Ingestion Specific test data for the substance or mixture is not available.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Silica 7631-86-9	= 7900 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h
Flazasulfuron 104040-78-0	> 5 g/kg (Rat)	> 2 g/kg (Rat)	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity**Numerical measures of toxicity - Product Information****Unknown Toxicity**

50 % of the mixture consists of ingredient(s) of unknown toxicity

LD50 Oral 4694/4908 mg/kg Rat-male Rat-female
LD50 Dermal > 2000 mg/kg (rat)
LC50 Inhalation (DUST) 6.17 mg/L [actual airborne concentration]

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

Skin corrosion/irritation	Not irritating.
Serious eye damage/eye irritation	May cause slight irritation.
Respiratory or skin sensitization	Not a skin sensitizer.
Germ cell mutagenicity	No information available.
Carcinogenicity	Classification based on data available for ingredients.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	Avoid repeated exposure.
Target Organ Effects	Eyes, Respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Silica 7631-86-9	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static	-	7600: 48 h Ceriodaphnia dubia mg/L EC50

Persistence and degradability No information available.

Bioaccumulation No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT For non-bulk packaging (less than 119 gallons) this product is not regulated.

UN/ID no.	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard class	9
Packing group	III
Special Provisions	146, 335, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33, 8
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Flazasulfuron), 9, III, Marine pollutant

TDG

UN/ID no.	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard class	9
Packing group	III
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Flazasulfuron), 9, III

MEX

UN/ID no.	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard class	9
Special Provisions	274, 331, 335
Packing group	III
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Flazasulfuron), 9, III

ICAO (air)

UN/ID no.	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard class	9
Packing group	III
Special Provisions	A158, A97, A179, A197
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Flazasulfuron), 9, III

IATA

	Limited quantity applies when the inner packaging weight is less than 5kg and the gross package weight is less than 30kg.
UN number	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport hazard class(es)	9
Packing group	III
Special Provisions	A158, A179, A97, A197
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Flazasulfuron), 9, III

IMDG

	Limited quantity applies when the inner packaging weight is less than 5kg and the gross package weight is less than 30kg.
UN number	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport hazard class(es)	9
Packing group	III
EmS-No.	F-A, S-F
Special Provisions	274, 335, 966, 967, 969
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (FLAZASULFURON), 9, III, MARINE POLLUTANT

15. REGULATORY INFORMATION**U.S. EPA Label Information****EPA Pesticide Registration Number** 71512-12-2217**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

Caution. Keep out of the reach of children. Harmful, if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. 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 cleaning equipment or disposing of equipment wash

waters or rinsate. **NON-TARGET ORGANISM ADVISORY** This product is toxic to plants and may adversely impact the forage and habitat of nontarget organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

PHYSICAL OR CHEMICAL HAZARDS: Do not use or store near heat or open flame.

International Inventories

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

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

U.S. State Right-to-Know Regulations

US State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Silica 7631-86-9	-	X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards 2	Flammability 0	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards 2 *	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

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