SAFETY DATA SHEET

Issue Date 13-Oct-2014 **Revision Date** 09-Jul-2018 **Version** 4

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 5513081
EPA Pesticide Registration Number 71512-12-2217
Product Size 5 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	**Manufacturer**	**Company Name**
PBI Gordon Corporation	PBI Gordon Corporation	PBI Gordon Corporation
1217 West 12th Street	1217 West 12th Street	1217 West 12th Street
Kansas City, MO 64101	Kansas City, MO 64101	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)

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

Danger

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

Appearance Granules **Physical State @20°C** Solid **Odor** Pleasant

Precautionary Statements - Prevention
• Do not breathe dust/fume/gas/mist/vapors/spray

• Obtain special instructions before use
• Do not handle until all safety precautions have been read and understood
• Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
• IF exposed or concerned: Get medical advice/attention
• Get medical advice/attention if you feel unwell
• Avoid release to the environment
• 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
• Collect spillage

Precautionary Statements - Storage
• Store locked up

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.

Other Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS. Number	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

First aid measures

General advice If symptoms persist, call a physician.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing 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 Move to fresh air in case of accidental inhalation of vapors or decomposition products. If not breathing, give artificial respiration. Call a physician.

Ingestion Call a physician or poison control center immediately. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

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

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Small Fire Carbon dioxide. Foam. Dry powder.

Large Fire Polar resistant foam. Water fog.

Unsuitable extinguishing media Avoid heavy hose streams.

Specific hazards arising from the chemical
No information available.

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. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

Environmental precautions

Environmental precautions 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. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

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. Clean contaminated surface thoroughly. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

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. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

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

labeled containers. Keep only in original container. Keep away from food, drink and animal feeding stuffs. Keep out of reach of children and pets.

Incompatible materials None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silica 7631-86-9	-	(vacated) TWA: 6 mg/m³ <1% Crystalline silica TWA: 20 mppcf : (80)/(% SiO2) mg/m³ TWA	IDLH: 3000 mg/m³ TWA: 6 mg/m³

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.

Individual protection measures, such as personal protective equipment

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

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

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. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State @20°C Solid
Appearance Granules
Color Light brown
Odor Pleasant
Odor threshold No information available

Property	Values	Remarks • Method
pH	5-6	
Melting point/freezing point	150 °C / 302 °F	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	0.79	
Water solubility	Partially soluble	
Solubility in other solvents	No information available	

Partition coefficient No information available
Autoignition temperature No information available
Decomposition temperature No information available
Oxidizing properties No information available

Other Information

Density VALUE 49.3 pounds/cubic foot

10. STABILITY AND REACTIVITY

Reactivity
No evidence

Chemical stability
Stable.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization
Will not occur.

Conditions to avoid
Keep out of reach of children. Keep away from heat, sparks and open flame.

Incompatible materials
None known.

Hazardous Decomposition Products
May emit toxic fumes under fire conditions.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation No known effect.

Eye contact May cause slight irritation.

Skin Contact Non-irritating.

Ingestion May cause slight irritation.

Chemical Name	LD50 Oral VALUE (mg/kg)	LD50 Dermal VALUE	LC50 Inhalation (DUST) VALUE
Silica 7631-86-9	> 5000 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)	-

Information on toxicological effects

Symptoms No information available.

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

Sensitization Not a skin sensitizer.
Germ cell mutagenicity None known.
Carcinogenicity None known.

Chemical Name	ACGIH	IARC	NTP	OSHA

Silica 7631-86-9		Group 3		

IARC (International Agency for Research on Cancer)
Not classifiable as a human carcinogen

Reproductive toxicity None known.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic toxicity Avoid repeated exposure.
Target Organ Effects Eyes, Respiratory system.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Toxicity 50 % of the mixture consists of ingredient(s) of unknown toxicity
LD50 Oral VALUE (mg/kg) 4694/4908 mg/kg Rat-male Rat-female
LD50 Dermal VALUE > 2000 mg/kg (rat)
LC50 Inhalation (DUST) VALUE > 6.17 mg/L [actual airborne concentration]
LC50 Inhalation (DUST) VALUE > 20.1 mg/L (nominal) 4 hours [Rat]

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects DO NOT apply directly to water, 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. This product may contaminate water through drift of spray in wind, or drift of soil from treated areas. This product has a high potential for runoff for several weeks after application. There is potential for injury to sensitive plants irrigated with run-off water containing flazasulfuron. No bee caution required.

50% of the mixture consists of components(s) of unknown hazards to the aquatic environment

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
Flazasulfuron degrades readily in the presence of water.

Bioaccumulation
Extremely low.

Mobility
Field dissipation studies show no downward movement of flazasulfuron through soil leaching.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

DOT

Description

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

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

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 REACH OF CHILDREN

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION: 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. This product may contaminate water through drift of spray in wind, or drift of soil from treated areas. This product has a high potential for runoff for several weeks after application. Poorly drained soils and soils with shallow water tables are more prone to produce runoff that contains this product. Avoid applying this product to ditches, swales, and drainage ways. Runoff of this product would be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. There is potential for injury to sensitive plants irrigated with run-off water containing flazasulfuron. No bee caution required.

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

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Silica	X	X		X		X	X	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 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

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

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

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

International Regulations

Mexico - Grade Moderate risk, Grade 2

16. OTHER INFORMATION

NFPA	**Health hazards** 2	**Flammability** 0	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 2	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Disclaimer
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End of Safety Data Sheet