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Version 1

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

Product identifier

Product Name Gordon's ORNAMEC® Over-The-Top Grass Herbicide

Other means of identification

Product Code PBI FP 778-6

EPA Pesticide Registration Number 2217-728

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 toxicity - Inhalation (Gases) | Category 3 |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Germ cell mutagenicity | Category 1A |
| Carcinogenicity | Category 1A |
| Reproductive toxicity | Category 2 |
| Aspiration toxicity | Category 1 |
| Flammable liquids | Category 3 |


Label elements

Emergency Overview

Danger

Hazard statements

Toxic if inhaled. Causes skin irritation. Causes serious eye irritation. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May be fatal if swallowed and enters airways.
Flammable liquid and vapor.

| |
|---|
|  |
| Appearance Liquid Physical state Liquid Odor Solvent |

Precautionary Statements - Prevention

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area
- Wash face, hands and any exposed skin thoroughly after handling
- Wear eye/face protection
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Keep cool

Precautionary Statements - Response

- IF exposed or concerned: Get medical advice/attention
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention
- If skin irritation occurs: Get medical advice/attention
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- Call a POISON CENTER or doctor/physician
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Do NOT induce vomiting
- In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage

- Store locked up
- Store in a well-ventilated place. Keep container tightly closed

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.

Percent volatile by volume: 36%

Other Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight-% |
|---------------|-------------|----------|
| Trade Secret | Proprietary | 40-50* |

| | | |
|-------------------|-------------|--------|
| Trade Secret | Proprietary | 20-30* |
| Trade Secret | Proprietary | 10-20* |
| Fluazifop-p-butyl | 79241-46-6 | 6.75 |
| Trade Secret | Proprietary | 0-10* |
| Trade Secret | Proprietary | 0-10* |

* 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). |
| 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 plenty of water. |
| Inhalation | Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If symptoms persist, call a physician. |
| Ingestion | Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. |
| Self-protection of the first aider | Remove all sources of ignition. |

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. Foam. Carbon dioxide (CO2). Dry chemical.

Specific hazards arising from the chemical

Flammable.

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 Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. 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 Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------|-------------------------------|--|--|
| Trade Secret | - | - | TWA: 25 ppm TWA: 125 mg/m ³ |
| Trade Secret | STEL: 150 ppm TWA: 100 ppm | TWA: 100 ppm TWA: 435 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m ³ | - |
| Trade Secret | TWA: 50 ppm | TWA: 50 ppm TWA: 245 mg/m ³ (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m ³ (vacated) S* S* | IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m ³ |

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. |
| Skin and body protection | Wear protective gloves and protective clothing. |
| 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. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|----------------|--------|----------------|--------------------------|
| Physical state | Liquid | Odor | Solvent |
| Appearance | Liquid | Odor threshold | No information available |
| Color | Amber | | |

| Property | Values | Remarks • Method |
|-------------------------------|--------------------------|------------------|
| pH | Not available | |
| Melting point/freezing point | <35 °F | |
| Boiling point / boiling range | > 110 °C / 230 °F | |
| Flash point | 44 °C / 112 °F | |
| Evaporation rate | < 1 | |
| Flammability (solid, gas) | No information available | |
| Flammability Limit in Air | | |
| Upper flammability limit: | 7.0 | |
| Lower flammability limit: | 1.1 | |
| Vapor pressure | <2 mm Hg | |
| Vapor density | >1 | |
| Specific Gravity | 0.89121 | |
| Water solubility | Emulsifiable | |
| 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 | 7.43 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

Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents.

Hazardous Decomposition Products

May emit toxic fumes under fire conditions. Carbon dioxide (CO₂). Carbon monoxide. Nitrogen oxides (NO_x). Halogens.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation No data available.

Eye contact No data available.

Skin Contact No data available.

Ingestion No data available.

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|----------------------|--------------------------|--|
| Trade Secret | - | - | = 3900 mg/m ³ (Rat) 4 h |
| Trade Secret | - | > 2000 mg/kg (Rabbit) | > 5.2 mg/L (Rat) 4 h = 3400 ppm (Rat) 4 h |
| Trade Secret | = 3400 mg/kg (Rat) | > 3160 mg/kg (Rabbit) | = 18 g/m ³ (Rat) 4 h |
| Trade Secret | = 4300 mg/kg (Rat) | - | = 47635 mg/L (Rat) 4 h |
| Trade Secret | = 1400 mg/kg (Rat) | = 12300 µL/kg (Rabbit) | - |

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 table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|---------------|-------|----------|-----|------|
| Trade Secret | A2 | Group 1 | | X |
| Trade Secret | | Group 3 | | |
| Trade Secret | | Group 2B | | X |

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Not classifiable as a human carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.
Chronic toxicity May cause adverse effects on the bone marrow and blood-forming system.
Target Organ Effects blood, Central nervous system, Eyes, Respiratory system, Skin.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 8% of the mixture consists of ingredient(s) of unknown toxicity

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

ATEmix (oral) 22325 mg/kg
ATEmix (dermal) 4920 mg/kg
ATEmix (inhalation-gas) 987 mg/L
ATEmix (inhalation-dust/mist) 2.4 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

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

| Chemical Name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------|---|---|--|---|
| Trade Secret | | 5000: 96 h Oncorhynchus mykiss mg/L LC50 | | 1000: 48 h Daphnia magna mg/L EC50 |
| Trade Secret | | 9.22: 96 h Oncorhynchus mykiss mg/L LC50 | | 6.14: 48 h Daphnia magna mg/L EC50 |
| Trade Secret | | 7.19 - 8.28: 96 h Pimephales promelas mg/L LC50 flow-through | | 6.14: 48 h Daphnia magna mg/L EC50 |
| Trade Secret | | 13.4: 96 h Pimephales promelas mg/L LC50 flow-through 2.661 - 4.093: 96 h Oncorhynchus mykiss mg/L LC50 static 13.5 - 17.3: 96 h Oncorhynchus mykiss mg/L LC50 13.1 - 16.5: 96 h Lepomis macrochirus mg/L LC50 flow-through 19: 96 h Lepomis macrochirus mg/L LC50 7.711 - 9.591: 96 h Lepomis macrochirus mg/L LC50 static 23.53 - 29.97: 96 h Pimephales promelas mg/L LC50 static 780: 96 h Cyprinus carpio mg/L LC50 semi-static 780: 96 h Cyprinus carpio mg/L LC50 30.26 - 40.75: 96 h Poecilia reticulata mg/L LC50 static | EC50 = 0.0084 mg/L 24 h | 3.82: 48 h water flea mg/L EC50 0.6: 48 h Gammarus lacustris mg/L LC50 |
| Trade Secret | 2.6: 72 h Pseudokirchneriella subcapitata mg/L EC50 | 6.04 - 6.61: 96 h Pimephales promelas mg/L LC50 flow-through 4.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 2.7: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 5.1: 96 h Poecilia reticulata mg/L LC50 semi-static | EC50 = 0.89 mg/L 5 min EC50 = 1.10 mg/L 15 min EC50 = 1.48 mg/L 30 min EC50 = 172 mg/L 24 h | 0.6: 48 h Daphnia magna mg/L EC50 7.9 - 14.1: 48 h Daphnia magna mg/L EC50 Static |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

Toxic to fish and aquatic invertebrates.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|-------------------------------|---|
| Disposal of wastes | This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). |
| Contaminated packaging | Do not reuse container, unless specified by the manufacturer. |
| US EPA Waste Number | D001 |

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

15. REGULATORY INFORMATION

U.S. EPA Label Information

EPA Pesticide Registration Number 2217-728

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. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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 |
|-------------------|------|-----|------|--------|--------|------|-------|------|-------|------|
| Trade Secret | X | X | | X | | X | X | X | X | X |
| Trade Secret | X | X | | X | | X | X | X | X | X |
| Trade Secret | X | X | | X | | X | X | X | X | X |
| Fluazifop-p-butyl | | | | | | | | X | | |
| Trade Secret | X | X | | X | | X | X | X | X | X |
| Trade Secret | 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 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 | CAS No. | Weight-% | SARA 313 - Threshold Values % |
|----------------|---------|----------|-------------------------------|
| Trade Secret - | | 10-20* | 1.0 |
| Trade Secret - | | 0-10* | 1.0 |
| Trade Secret - | | 0-10* | 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)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Trade Secret | 100 lb | | | X |

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) |
|---------------|--------------------------|----------------|--|
| Trade Secret | 100 lb | | RQ 100 lb final RQ RQ 45.4 kg final RQ |
| Trade Secret | 5000 lb | | RQ 5000 lb final RQ RQ 2270 kg final RQ |

US State Regulations

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---------------|------------|---------------|--------------|
| Trade Secret | | X | |
| Trade Secret | X | X | X |
| Trade Secret | X | X | X |
| Trade Secret | X | X | X |

International Regulations

Mexico - Grade

Moderate risk, Grade 2

| Chemical Name | Carcinogenicity | Exposure Limits |
|---------------|-----------------|--|
| Trade Secret | | Mexico: TWA 100 ppm Mexico: TWA 435 mg/m ³ Mexico: STEL 150 ppm Mexico: STEL 655 mg/m ³ |
| Trade Secret | | Mexico: TWA 50 ppm Mexico: TWA 245 mg/m ³ Mexico: STEL 75 ppm Mexico: STEL 365 mg/m ³ |

16. OTHER INFORMATION

| | | | | |
|-------------|------------------|----------------|--------------------|------------------------------------|
| <u>NFPA</u> | Health hazards 2 | Flammability 2 | Instability 0 | Physical and Chemical Properties - |
| <u>HMIS</u> | Health hazards 2 | Flammability 2 | 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