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Version 2

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

Product identifier

Product Name Gordon's LAUNCH®

Other means of identification

Product Code PBI FP 791-1

Recommended use of the chemical and restrictions on use

Recommended Use Fertilizers.
Uses advised against No information available.

Details of the supplier of the safety data sheet

| | | |
|--|--|--|
| Supplier | Manufacturer | Company Name |
| PBI Gordon Corporation 1217 West 12th Street Kansas City, MO 64101 | PBI Gordon Corporation 1217 West 12th Street Kansas City, MO 64101 | 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)


| | |
|---------------------------|------------|
| Skin corrosion/irritation | Category 2 |
| Carcinogenicity | Category 2 |
| Flammable liquids | Category 3 |

Label elements

Emergency Overview

Warning

Hazard statements
Suspected of causing cancer. Causes skin irritation.
Flammable liquid and vapor.



Appearance Liquid **Physical state** Liquid **Odor** No information available

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
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- Keep container tightly closed

Precautionary Statements - Response

- IF exposed or concerned: Get medical advice/attention
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- 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 cool

Precautionary Statements - Disposal

- Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

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 No. | Weight-% |
|---------------------------|-----------|----------|
| Potassium Citrate | 866-84-2 | 2.2 |
| Iron sulfate heptahydrate | 7782-63-0 | 1.8 |
| Sodium o-phenylphenol | 132-27-4 | 0.87 |
| Potassium hydroxide | 1310-58-3 | 0.3 |

* 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 | Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists: Get medical advice/attention. |
| Skin Contact | Wash off immediately with plenty of water. |
| Inhalation | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if irritation develops and persists. |
| Ingestion | Do NOT induce vomiting. Call a poison control center or doctor for treatment advice. |

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. Water spray (fog).

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

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

Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation, especially in confined areas. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers.

Incompatible materials

Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--|------------------------------|--|------------------------------|
| Iron sulfate heptahydrate 7782-63-0 | TWA: 1 mg/m ³ Fe | (vacated) TWA: 1 mg/m ³ Fe | TWA: 1 mg/m ³ Fe |
| Potassium hydroxide 1310-58-3 | Ceiling: 2 mg/m ³ | (vacated) Ceiling: 2 mg/m ³ | Ceiling: 2 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 The use of explosion-proof mechanical ventilation is recommended if this product is to be used in an enclosed area.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Wear safety glasses with side shields (or 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 | No information available |
| Appearance | Liquid | Odor threshold | No information available |
| Color | Black or Dark brown | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------------|--------------------------|-------------------------|
| pH | 9.0-10.0 | |
| Melting point/freezing point | <35 °F | |
| Boiling point / boiling range | > 100 °C / 212 °F | |
| Flash point | 42 °C / 108 °F | |
| 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 | <17 mm Hg | |
| Vapor density | No information available | |
| Specific Gravity | No information available | |
| Water solubility | Miscible in water | |
| 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 8.88 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

Acids.

Incompatible materials

Acids.

Hazardous Decomposition Products

None known.

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 |
|-----------------------------------|--|-------------|-----------------|
| Sodium o-phenylphenol 132-27-4 | = 1000 mg/kg (Rat) = 656 mg/kg (Rat) | - | - |
| Potassium hydroxide 1310-58-3 | = 284 mg/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** 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 |
|-----------------------------------|-------|----------|-----|------|
| Sodium o-phenylphenol 132-27-4 | | Group 2B | | X |

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

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 liver effects.**Target Organ Effects** Eyes, Gastrointestinal tract (GI), Liver, Respiratory system, Skin.**Aspiration hazard** No information available.**Numerical measures of toxicity - Product Information****Unknown Acute Toxicity** 9% 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) 24851 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life

96% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|----------------------------------|----------------------|---|----------------------------|-----------|
| Potassium hydroxide 1310-58-3 | | 80: 96 h Gambusia affinis mg/L LC50 static | | |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

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 See Section 2: Hazards not otherwise classified (HNOC)

14. TRANSPORT INFORMATION

DOT

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

FERTILIZERS NOI - NMFC #68140, SUB 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 Not Applicable

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 |
|---------------------------|------|-----|------|--------|--------|------|-------|------|-------|------|
| Potassium Citrate | X | X | | X | | X | X | X | X | X |
| Iron sulfate heptahydrate | | | | | | X | X | | X | X |
| Sodium o-phenylphenol | X | X | | X | | X | X | X | X | X |
| Potassium hydroxide | 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 | SARA 313 - Threshold Values % |
|----------------------------------|-------------------------------|
| Sodium o-phenylphenol - 132-27-4 | 0.1 |

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute health hazard | Yes |
| Chronic Health Hazard | No |
| 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 |
|--|-----------------------------|------------------------|---------------------------|----------------------------|
| Iron sulfate heptahydrate 7782-63-0 | | | | X |
| Potassium hydroxide 1310-58-3 | 1000 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) |
|--|--------------------------|----------------|---|
| Iron sulfate heptahydrate 7782-63-0 | 1000 lb | | RQ 1000 lb final RQ RQ 454 kg final RQ |
| Potassium hydroxide 1310-58-3 | 1000 lb | | RQ 1000 lb final RQ RQ 454 kg final RQ |

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

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|--|------------|---------------|--------------|
| Iron sulfate heptahydrate 7782-63-0 | | X | X |
| Sodium o-phenylphenol 132-27-4 | X | X | |

| | | | |
|----------------------------------|---|---|---|
| Potassium hydroxide 1310-58-3 | X | X | X |
|----------------------------------|---|---|---|

International Regulations

Mexico - Grade Moderate risk, Grade 2

| Chemical Name | Carcinogenicity | Exposure Limits |
|---------------------------|-----------------|---|
| Iron sulfate heptahydrate | | Mexico: TWA 1 mg/m ³ Mexico: STEL 2 mg/m ³ |

16. OTHER INFORMATION

| | | | | |
|-------------|------------------|----------------|--------------------|------------------------------------|
| NFPA | Health hazards 0 | Flammability 1 | Instability 0 | Physical and Chemical Properties - |
| HMIS | Health hazards 0 | Flammability 1 | Physical hazards 0 | Personal protection X |

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End of Safety Data Sheet