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Version 3

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

Product identifier

Product Name TopPlot™ Seed Starter Liquid Fertilizer 15-0-1 Concentrate

Other means of identification

Product Code PBI FP 7821126

Product Size 2/2.5 U. S. Gal.

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

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)

Skin Corrosion/Irritation Category	Category 2
Serious eye damage/eye irritation	Category 2
Flammable liquids	Category 3

Label elements

Emergency Overview

Warning

Hazard statements

Causes skin irritation. Causes serious eye irritation.
 Flammable liquid and vapor.



Appearance Liquid

Physical state Liquid

Odor Organic

Precautionary Statements - Prevention

- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- 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 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

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)

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 %
Iron sulfate heptahydrate	7782-63-0	0.44

* 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

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 contaminated clothing before reuse. If skin irritation persists, call a physician. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation

Remove to fresh air. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors.

Ingestion

Rinse mouth. Drink plenty of water. 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

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 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. Keep people away from and upwind of spill/leak.

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).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

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

Incompatible materials Corrosive materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Iron sulfate heptahydrate	TWA: 1 mg/m ³ Fe	(vacated) TWA: 1 mg/m ³ Fe	TWA: 1 mg/m ³ Fe

7782-63-0			
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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 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	Organic
Appearance	Liquid	Odor threshold	No information available
Color	Black		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	9.0-10.0	
Melting point/freezing point	No information available	
Boiling point / boiling range	> 100 °C / 212 °F	
Flash point	47 °C / 117 °F	CC (closed cup)
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	1.121	
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 9.2-9.6 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

None known.

Incompatible materials

Corrosive materials.

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.

Information on toxicological effects

Symptoms	No information available.
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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	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Chronic toxicity	Avoid repeated exposure. 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 Toxicity	84 % of the mixture consists of ingredient(s) of unknown toxicity
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The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	6654 mg/kg
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12. ECOLOGICAL INFORMATION

Ecotoxicity

52% 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

Disposal of wastes

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

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
Iron sulfate heptahydrate						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	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

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

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Iron sulfate heptahydrate 7782-63-0		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

Disclaimer

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End of Safety Data Sheet