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Version 1

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

Product identifier.

Product Name Liquid Weed & Feed 2 15-0-0

Other means of identification

Product Code PBI FP 7311072

EPA Pesticide Registration Number 2217-916

Product Size 4/1 U.S. Gal.

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)

| | |
|-----------------------------------|-------------|
| Acute dermal toxicity | Category 4 |
| Serious eye damage/eye irritation | Category 2B |
| Chronic Aquatic Toxicity | Category 3 |

Label elements

Emergency Overview

Signal word

Warning

Hazard statements

- Harmful in contact with skin
- Causes eye irritation
- Harmful to aquatic life with long lasting effects



Appearance Liquid

Physical state Liquid

Odor Amines

Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor

IF ON SKIN: Wash with plenty of water and soap

Call a POISON CENTER or doctor if you feel unwell

Take off contaminated clothing and wash it before reuse

If skin irritation or rash occurs: Get medical advice/attention

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.

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

Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

| Chemical name | CAS-No | Weight-% |
|---------------------------|--------------|----------|
| 2,4-D, dimethylamine salt | 2008-39-1 | 4.51 |
| MCPP-p Dimethylamine Salt | 66423-09-4 | 2.33 |
| Trade Secret | Trade secret | 0-1* |

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

4. FIRST AID MEASURES

Description of first aid measures

| | |
|---|--|
| General advice | Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Call a physician if irritation persists. |
| Skin contact | Wash off immediately with soap and plenty of water for at least 15 minutes. If symptoms persist, call a physician. |
| Inhalation | Remove to fresh air. Get medical attention immediately if symptoms occur. |
| 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 | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). 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 Water. Carbon dioxide (CO2). Foam.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical 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.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment for fire-fighters 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 Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas Do not flush into surface water or sanitary sewer system Prevent further leakage or spillage if safe to do so Prevent product from entering drains See Section 12 for additional ecological information

Other information Refer to protective measures listed in Sections 7 and 8.

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 Use personal protective equipment as required. 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 Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--|--|--|---|
| 2,4-D, dimethylamine salt 2008-39-1 | TWA: 10 mg/m ³ inhalable fraction S* | TWA: 10 mg/m ³ | IDLH: 10 mg/m ³ , TWA: 10 mg/m ³ |
| Trade Secret | STEL: 15 ppm TWA: 5 ppm | TWA: 10 ppm TWA: 18 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 18 mg/m ³ | IDLH: 500 ppm TWA: 10 ppm TWA: 18 mg/m ³ |

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 Tight sealing safety 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Liquid
Color Brown
Odor Amines
Odor threshold No information available

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------------|-------------------|----------------------------------|
| pH | 8.0 | |
| Melting point/freezing point | <32 °F | |
| Boiling point / boiling range | > 100 °C / 212 °F | |
| Flash point | > 94 °C / 201 °F | Pensky-Martens Closed Cup (PMCC) |
| 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 | <17 mm Hg | |
| Vapor density | >1 | |
| Specific Gravity | 1.1178 | |
| Water solubility | Soluble in water | |
| 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

Oxidizing properties No information available
Liquid Density 9.3091 pounds/gallon
Bulk density No information available

10. STABILITY AND REACTIVITY

Reactivity

No information available.

Stability

Stable

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

Will not occur.

Conditions to avoid

Keep out of reach of children.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

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

Inhalation May be harmful if inhaled.

Eye contact Causes eye irritation.

Skin contact May cause irritation. May be absorbed through the skin in harmful amounts. Harmful in contact with skin.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|---------------------|-------------------------|------------------------|
| 2,4-D, dimethylamine salt 2008-39-1 | = 625 mg/kg (Rat) | = 2115 mg/kg (Rabbit) | - |
| Trade Secret | = 698 mg/kg (Rat) | = 3900 mg/kg (Rat) | = 4540 ppm (Rat) 6 h |

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

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

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

ATEmix (inhalation-gas) 12383 mg/L

Unknown Toxicity

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

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

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

50 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

LD50 Oral > 5000 mg/kg body weight (rat)
LD50 Dermal > 2000 mg/kg body weight (rabbit)

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation** May cause skin irritation.**Serious eye damage/eye irritation** Causes eye irritation.**Respiratory or skin sensitization** Not a skin sensitizer.**Germ cell mutagenicity** No information available.

Carcinogenicity The International Agency for Research on Cancer (IARC) lists chlorophenoxy herbicides in its Group 2B (limited evidence for Carcinogenicity in humans.) The US EPA has given the chlorophenoxy Herbicides 2,4-D, 2,4-DP, MCPP, and MCPA a Class D classification (not classifiable as to human carcinogenicity.) More current 2,4-D lifetime feeding studies in rats and mice did not show carcinogenic effects and a recent World Health Organization (WHO) review of 2,4-D toxicology has concluded that 2,4-D is not a carcinogen. The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---|-------|----------|-----|------|
| 2,4-D, dimethylamine salt 2008-39-1 | - | Group 2B | - | - |
| MCPP-p Dimethylamine Salt 66423-09-4 | - | Group 2B | - | - |

Legend**IARC (International Agency for Research on Cancer)***Group 2B - Possibly Carcinogenic to Humans***Reproductive toxicity** No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** No information available.**Target Organ Effects** Eyes, Respiratory system, Skin.**12. ECOLOGICAL INFORMATION****Ecotoxicity** Harmful to aquatic life with long lasting effects.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------|---|--|----------------------------|---|
| Trade Secret | 9: 96 h Pseudokirchneriella subcapitata mg/L EC50 | 210: 96 h Poecilia reticulata mg/L LC50 static 111 - 125: 96 h Oncorhynchus mykiss mg/L LC50 120: 96 h Oncorhynchus mykiss mg/L LC50 static 127 - 349: 96 h Poecilia reticulata mg/L LC50 semi-static 396: 96 h Brachydanio rerio mg/L LC50 static | EC50 = 26.8 mg/L 15 min | 88.7: 48 h Daphnia magna Straus 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

Note: **Products under 238 gallons not regulated by DOT. Below are designations for products over 238 gallons. See RQ**

DOT

UN/ID no. UN3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class 9
Packing group III
Reportable Quantity (RQ) 2,4-D, dimethylamine salt: RQ (lb)= 2217.00= 238 gallons
Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D, dimethylamine salt), 9, III

TDG

UN/ID no. UN3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class 9
Packing group III
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D, dimethylamine salt), 9, III

MEX

UN/ID no. UN3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class 9
Special Provisions 274, 331, 335
Packing group III
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D, dimethylamine salt), 9, III

ICAO (air)

UN/ID no. UN3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class 9
Packing group III
Special Provisions A97, A158, A197
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D, dimethylamine salt), 9, III

IATA

Limited quantity applies with an inner packaging less than 5 L or gross package weight less than 30 kg.
UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport hazard class(es) 9

| | |
|---------------------------|---|
| Packing group | III |
| Special Provisions | A97, A158, A197 |
| Description | UN3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D, dimethylamine salt), 9, III |

| | |
|-----------------------------------|---|
| IMDG | Limited quantity applies with an inner packaging less than 5 L or gross package weight less than 30 kg. |
| UN number | UN3082 |
| UN proper shipping name | Environmentally hazardous substance, liquid, n.o.s. |
| Transport hazard class(es) | 9 |
| Packing group | III |
| EmS-No. | F-A, S-F |
| Special Provisions | 274, 335, 969 |
| Description | UN3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D, dimethylamine salt), 9, III |

15. REGULATORY INFORMATION

U.S. EPA Label Information

EPA Pesticide Registration Number 2217-916

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

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear long-sleeved shirt, long pants, shoes, socks, and chemical-resistant gloves made of any waterproof material.

Environmental Hazards: This pesticide is toxic to fish and aquatic invertebrates and may adversely affect non-target plants. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters.

Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

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 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 | 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 | Extremely Hazardous Substances RQs |
|--|--------------------------|------------------------------------|
| 2,4-D, dimethylamine salt 2008-39-1 | 100 lb | - |
| Trade Secret | 1000 lb | - |

US State Regulations

U.S. State Right-to-Know Regulations

US State Regulations

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

16. OTHER INFORMATION

| | | | | |
|-------------|------------------|----------------|--------------------|------------------------------------|
| NFPA | Health hazards 2 | Flammability 1 | Instability 0 | Physical and Chemical Properties - |
| HMIS | Health hazards 2 | Flammability 1 | 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