Material Safety Data Sheet

Product Name: Gordon's Orchard Master Herbicide

MSDS No.: 806-1 **Version No.:** 008 **EPA Registration No.:** 2217-703

1. Basic Information:

Manufacturer: PBI/Gordon Corporation
Address: 1217 West 12th Street
City, State Zip: Kansas City, MO 64101-1407
Information Contact: Environmental, Health, & Safety Dept.
Information Telephone Number: (816)421-4070
Emergency Contact: Chemtrec
Emergency Telephone Number: (800)424-9300

2	Health
1	Flammability
0	Reactivity
B	Pers. Protection

Last Update: 9/23/2002

Chemical State: [X] Liquid [ ] Gas [ ] Solid
Chemical Type: [ ] Pure [X] Mixture

2. Ingredients:

[ ] Trade Secret *(ND = Not Disclosed)*

CAS No.	Chemical Name	% Range	EHS	NTP	IARC	SUB Z	SARA 313	OSHA PEL	ACGIH TLV	Other Limits
5742198	Diethanolamine Salt of 2,4-dichlorophenoxyacetic acid (2,4-D)	16.3	N	N	N	N	N	NI	NI	NI
2008391	Dimethylamine Salt of 2,4-dichlorophenoxyacetic acid (2,4-D)	33.2	N	N	Y	N	N	NI	NI	NI
107211	Ethylene glycol	10.09	N	N	N	N	Y	NI	100mg/m3	NI

3. Hazardous Identification:

Hazard Catagory:
[X] Acute [X] Chronic [ ] Fire [ ] Pressure [ ] Reactive

Hazardous Identification Information:
Amber liquid; amine-type odor.

Contact may cause eye injury. May be absorbed through the skin. Irritating/damaging to respiratory tract if inhaled, and to gastrointestinal tract if swallowed.

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.

4. First Aid Measures:

Route(s) of Entry:
Contact, Inhalation, Ingestion.

Health Hazards (Acute and Chronic):
EYES: Contact may cause irritation, burns and corneal injury.

SKIN: Moderate to severe skin irritant; may be absorbed through the skin.

INHALATION: May be moderately irritating or damaging to the mucous membranes.

INGESTION: May irritate and damage the gastrointestinal tract.

First Aid Measures (Continued)

Signs and Symptoms:
Contact may cause burning and swelling. Inhalation may cause burning in the chest, with coughing. Prolonged inhalation may cause headache and dizziness. Ingestion usually leads to vomiting, pain in the chest and abdomen, and diarrhea.

Medical Conditions Generally Aggravated by Exposure:
Individuals with chronic skin disease or known sensitivity to chlorophenoxy compounds should either avoid using them or take strict precautions to avoid contact. (respirator, gloves, etc.) Existing conditions, such as asthma, may be aggravated.

Emergency First Aid Procedure:
If in eyes:
· Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
· Call a poison control center or doctor for treatment advice.

If on skin:
· Take off contaminated clothing.
· Rinse skin immediately with plenty of water for 15-20 minutes.
· Call a poison control center or doctor for treatment advice.

If swallowed:
· Call a poison control center or doctor immediately for treatment advice.
· Have person sip a glass of water if able to swallow.
· Do not induce vomiting unless told to by a poison control center or doctor.

If inhaled:
- Remove victim to fresh air.
- Apply artificial respiration if needed.
- If breathing is difficult, administer oxygen.
· Call a poison control center or doctor for treatment advice.

Other Health Warnings:
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate

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First Aid Measures (Continued)

the use of gastric lavage.

5. Fire Fighting Measures:

Flash Point: 112°F **F.P. Method:**

Lower Explosive Limit: NI

Upper Explosive Limit: NI

Fire Extinguishing Media:
Foam, CO2, dry chemical, water. 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, and, therefore, would not be classified as a combustible liquid.

Special Fire Fighting Procedures:
Wear positive-pressure breathing apparatus and full protective clothing. Stay up-wind and out of low areas.

Unusual Fire and Explosion:
This product does not ignite readily, but may burn at a very high temperature. The fire may produce irritating or poisonous gases. Runoff from fire control area or dilution water may cause pollution. If surface water is contaminated, contact local authorities.

6. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:
Do not touch spilled material. See Section 8 for Personal Protective Equipment. Contain and absorb spilled material on Dri-Rite, sand or other inert absorbent. Collect into drums; cover and label for disposal. Flush area with water if possible.

7. Handling and Storage:

Precautions to be Taken:
Do not contaminate water, food, or feed by storage or disposal.

STORAGE: Store in original container in a locked storage area inaccessible to children or pets. Keep from freezing.

Other Precautions:
Engineering Control Statements:
Containers over 1 gallon and less than 5 gallons in capacity: Mixers and loaders who do not use a mechanical system (probe and pump) to transfer the contents of this container must wear coveralls or a chemical-resistant apron in addition to the other required PPE.

Containers of 5 gallons or more in capacity: Do not open-pour from this container. A mechanical system (probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a nonrefillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Undiluted spray droplets may damage the paint, coating or finish of vehicles. Vehicles should not be sprayed. If accidental exposure does occur, the vehicle should be washed before the spray droplets dry.

8. Exposure Controls/Personal Protection:

Ventilation Requirements:
Good local ventilation is recommended; mechanical ventilation may be required if exposure limits may be exceeded.

Personal Protective Equipment:
Personal Protective Equipment (PPE):
Applicators and other handlers must wear long-sleeved shirt and long

Exposure Controls/Personal Protection (Continued)

pants, waterproof gloves, shoes plus socks, and protective eyewear. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be reused until it has been cleaned.

Persons engaged in open pouring of this product must also wear coveralls or a chemical resistant apron.

EYE PROTECTION: Safety glasses, goggles, or face shield are recommended.

RESPIRATORY PROTECTION: If exposure limits may be exceeded, wear a respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a NIOSH approved respirator with any R, P or HE filter.

9. Physical and Chemical Properties:

Boiling Point: 230°F **Melting Point:** NI

Evaporation Rate (Butyl Acetate = 1) : <1

Vapor Pressure (mm Hg.): <17 (20°C)

Vapor Density (Air = 1): >1

Specific Gravity (H20 = 1): 1.18988

Solubility in Water: Infinite

Appearance and Odor: Amber liquid with an amine odor

Other Information:
pH: 7.5-8.5
Freezing point: <5 F
Viscosity: 26.3 cp
Density: 9.92 pounds/gallon

10. Stability and Reactivity:

Stability:
Stable.

Incompatibility (Materials to Avoid):
Do not mix with acidic materials, as this will ruin the product.

Decomposition/By-Products:
May produce gases such as HCl, nitrogen oxides, and carbon monoxide when burning.

Hazardous Polymerization:
Will not occur.

11. Toxicological Information:

Primary Eye Irritation--Corrosive to the eye.

Acute Inhalation Toxicity--LC50 (4H): >1.54 mg/L (highest attainable concentration)

Acute Oral Toxicity--LD50: 2621 mg/kg body weight.

Acute Dermal Toxicity--LD50: >2000 mg/kg body weight.

Mild skin irritant.

Not a dermal sensitizer.

12. Ecological Information:

ENVIRONMENTAL HAZARDS:

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Ecological Information (Continued)

To prevent injury to susceptible crops and other desirable plants including but not limited to cotton, tomatoes, garden crops, and ornamentals, avoid contact with the spray solution, spray droplets, and spray mist (fine droplets). Applications are recommended only when there is no potential hazard from spray drift during dormant and active growth periods. Use coarse spray droplets, follow the recommendations of the equipment manufacturers, and apply when the wind velocity is less than 10 mph. Always check the spray tank and equipment for cleanness before preparing the spray solution. To avoid subsequent injury to crops other than the use site, immediately clean the spray equipment and dispose the rinsates according to label instructions. Avoid contamination of water supplies that may be used to irrigate or water susceptible crops, or to be used for domestic purposes.

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. For terrestrial uses, 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 disposing of equipment washwater.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

13. Disposal Considerations:

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: FOR PLASTIC CONTAINER: - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke. FOR METAL DRUMS - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

14. Transport Information:

The following guidlines apply for domestic ground transport. If shipping by air or ocean, please contact our Transportation Department.

Freight Class: Herbicides, NOI - NMFC Class #50320

Proper Shipping Name:
For package sizes less than 26.12 gallons: product is non-regulated.
For package sizes 26.12 gallons or greater: Environmentally Hazardous Substances, Liquid, N.O.S., 9, UN3082, PGIII, RQ (2,4-D)

If shipped in bulk containers (greater than 119 gallons), this product is a Marine Pollutant.

When shipped as a Hazardous Material, label required is Class 9 (Miscellaneous). Placards required on bulk shipments only.

15. Regulatory Information:

OSHA STATUS: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

Regulatory Information (Continued)

TSCA STATUS: This product is exempt from TSCA Regulation under FIFRA Section 3(2)(B)(ii) when used as a pesticide.

CERCLA REPORTABLE QUANTITY: 202 pounds of the formulation which contains 100 pounds of Dimethylamine 2,4-D and Diethanolamine 2,4-D

SARA TITLE III:
SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: None
SECTION 311/312 HAZARD CATEGORIES: Immediate Health Hazard, Delayed Health Hazard
SECTION 313 TOXIC CHEMICALS: Ethylene glycol CAS# 107-21-1

RCRA STATUS: When discarded in its purchased form, this product is a listed RCRA hazardous waste and should be managed as a hazardous waste. (40 CFR Part 261.20-24)

16. Other Information:

REASON FOR ISSUE: To revise Sections 4 and 11 and the RQ in Section 15.

NOTE: NI means not indicated.

The information and statements in this Material Safety Data Sheet are believed to accurately reflect the scientific evidence used in making the hazard determination, but is not to be construed as a warranty or representation for which we assume legal responsibility. Additional information may be necessary or desirable depending on particular, exceptional or variable conditions or circumstances of use or storage or because of locally applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information available to you and must make independent determinations of the suitability of the information for your particular circumstances or conditions and of the completeness of the information available from all sources to assure both the proper use of the material described herein and the safety and health of employees.