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Version 3

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

### Product identifier

**Product Name** Orchard Master® CA Broadleaf Herbicide

### Other means of identification

**Product Code** PBI FP 807-1

**EPA Pesticide Registration Number** 2217-703

### 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 dermal toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Chronic Aquatic Toxicity	Category 2
Flammable liquids	Category 3

### Label elements

### Emergency Overview

#### Danger

#### Hazard statements

Harmful in contact with skin. Harmful if inhaled. Causes serious eye damage. Suspected of causing cancer. Toxic to aquatic life with long lasting effects.

Flammable liquid and vapor.



**Appearance** Liquid

**Physical state** Liquid

**Odor** Amines

**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
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Avoid release to the environment
- 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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- Call a POISON CENTER or doctor/physician if you feel unwell
- Wash contaminated clothing before reuse
- If skin irritation or rash occurs: Get medical advice/attention
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction
- Collect spillage

**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)**

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****3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS. Number	Weight %
2,4-D, dimethylamine salt	2008-39-1	33.2
Diethanolamine Salt of 2,4-dichlorophenoxyacetic acid	5742-19-8	16.3
Trade Secret	Proprietary	10-20*
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 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 breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Artificial respiration and/or oxygen may be necessary. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

**Ingestion**

Do NOT induce vomiting. Drink plenty of water. Rinse mouth. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, 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 (CO<sub>2</sub>). Dry chemical. Water spray (fog).

**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.

**Protective equipment and precautions for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

## 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. Take precautionary measures against static discharges. 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 tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place.

**Incompatible materials** Acids.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2,4-D, dimethylamine salt 2008-39-1	TWA: 10 mg/m <sup>3</sup> inhalable fraction S*	TWA: 10 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> , TWA: 10 mg/m <sup>3</sup>
Trade Secret	Ceiling: 100 mg/m <sup>3</sup> aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m <sup>3</sup>	-
Trade Secret	TWA: 1 mg/m <sup>3</sup> inhalable fraction and vapor S*	(vacated) TWA: 3 ppm (vacated) TWA: 15 mg/m <sup>3</sup>	TWA: 3 ppm TWA: 15 mg/m <sup>3</sup>

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

<b>Physical state</b>	Liquid	<b>Odor</b>	Amines
<b>Appearance</b>	Liquid	<b>Odor threshold</b>	No information available
<b>Color</b>	Amber		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
<b>pH</b>	7.5-8.5		
<b>Melting point/freezing point</b>	<5 °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:	No information available
Lower flammability limit:	No information available
Vapor pressure	<17 mm Hg
Vapor density	>1
Specific Gravity	1.1865
Water solubility	Soluble 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	9.881 pounds/gallon
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## 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**

Keep from freezing.

**Incompatible materials**

Acids.

**Hazardous Decomposition Products**

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

## 11. TOXICOLOGICAL INFORMATION

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

Inhalation	See "Numerical measures of toxicity-product information" in this section.
Eye contact	Corrosive to eyes.
Skin Contact	Causes mild skin irritation.
Ingestion	See "Numerical measures of toxicity-product information" in this section.

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	= 4700 mg/kg ( Rat )	= 10600 mg/kg ( Rat ) = 9530 µL/kg	-

		( Rabbit )	
Trade Secret	= 0.62 mL/kg ( Rat ) = 620 µL/kg ( Rat )	= 7640 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** 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		
Diethanolamine Salt of 2,4-dichlorophenoxyacetic acid 5742-19-8		Group 2B		
Trade Secret	A3	Group 2B		X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

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** Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.  
**Target Organ Effects** Central nervous system, Eyes, Respiratory system, Skin.  
**Aspiration hazard** No information available.

**Numerical measures of toxicity - Product Information**

**Unknown Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity  
**Oral LD50** 2621 mg/kg body weight  
**Dermal LD50** > 2000 mg/kg body weight  
**Inhalation LC50** > 1.54 mg/L (4 Hr.)

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

ATEmix (inhalation-gas) 96154 mg/L

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Toxic to aquatic life with long lasting effects

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Trade Secret	6500 - 13000: 96 h Pseudokirchneriella	41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18:	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min	46300: 48 h Daphnia magna mg/L EC50

	subcapitata mg/L EC50	96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static	EC50 = 620.0 mg/L 30 min	
Trade Secret	7.8: 72 h Desmodemus subspicatus mg/L EC50 2.1 - 2.3: 96 h Pseudokirchneriella subcapitata mg/L EC50	4460 - 4980: 96 h Pimephales promelas mg/L LC50 flow-through 1200 - 1580: 96 h Pimephales promelas mg/L LC50 static 600 - 1000: 96 h Lepomis macrochirus mg/L LC50 static	EC50 = 73 mg/L 5 min EC50 > 16 mg/L 16 h	55: 48 h Daphnia magna 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**

<b>Disposal of wastes</b>	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
<b>Contaminated packaging</b>	Do not reuse container, unless specified by the manufacturer.
<b>US EPA Waste Number</b>	D001 See Section 2: Hazards not otherwise classified (HNOC)

**14. TRANSPORT INFORMATION****DOT**

<b>Proper shipping name</b>	For package sizes less than 30.48 gallons: product is non-regulated.
<b>Description</b>	For package sizes 30.48 gallons or greater: UN3082, Environmentally Hazardous Substances, Liquid, N.O.S., 9, PGIII, RQ (2,4-D) 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  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****U.S. EPA Label Information**

**EPA Pesticide Registration Number 2217-703****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**

Danger. Keep out of the reach of children.

Hazards to Humans and Domestic Animals:

DANGER. Corrosive. Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray mist or vapor.

**Environmental Hazards**

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

**International Inventories**

<b>TSCA</b>	Not Listed
<b>DSL/NDL</b>	Not Listed
<b>EINECS/ELINCS</b>	Not Listed
<b>ENCS</b>	Not Listed
<b>IECSC</b>	Not Listed
<b>KECL</b>	Not Listed
<b>PICCS</b>	Not Listed
<b>AICS</b>	Listed

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - 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	NDL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
2,4-D, dimethylamine salt				X			X		X	X
Diethanolamine Salt of 2,4-dichlorophenoxyacetic acid				X						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	SARA 313 - Threshold Values %
Trade Secret -	1.0
Trade Secret -	1.0

**SARA 311/312 Hazard Categories**

<b>Acute health hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	Yes
<b>Sudden release of pressure hazard</b>	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)

**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)
2,4-D, dimethylamine salt 2008-39-1	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Diethanolamine Salt of 2,4-dichlorophenoxyacetic acid 5742-19-8	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
Trade Secret	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

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

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

**International Regulations****Mexico - Grade**

Serious risk, Grade 3

Chemical Name	Carcinogenicity	Exposure Limits
Trade Secret		Mexico: Ceiling 100 mg/m <sup>3</sup>

**16. OTHER INFORMATION**

<b>NFPA</b>	Health hazards 3	Flammability 1	Instability 0	Physical and Chemical Properties -
<b>HMIS</b>	Health hazards 3	Flammability 1	Physical hazards 0	Personal protection X

**Disclaimer**

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End of Safety Data Sheet