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Version 4

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

Product identifier

Product Name Amine 400 2,4-D Weed Killer

Other means of identification

Product Code PBI FP 8141072-1

EPA Pesticide Registration Number 2217-2

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

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 Oral Toxicity	Category 4
Serious eye damage/eye irritation	Category 1
Skin Sensitization	Category 1
Chronic Aquatic Toxicity	Category 2
Flammable liquids	Category 3

Label elements

Emergency Overview

Danger

Hazard statements

Harmful if swallowed. Causes serious eye damage. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

Flammable liquid and vapor.



Appearance Liquid

Physical state Liquid

Odor Amines

Precautionary Statements - Prevention

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Wear protective gloves/protective clothing/eye protection/face protection
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Contaminated work clothing should not be allowed out of the workplace
- Avoid release to the environment
- 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 skin irritation or rash occurs: Get medical advice/attention
- Wash contaminated clothing before reuse
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth
- In case of fire: Use CO2, dry chemical, or foam for extinction
- Collect spillage

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)

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	46.47

* 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. Call a physician.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

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. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

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. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use. Foam. Carbon dioxide (CO₂). Dry chemical. Water spray (fog).

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. 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

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). Take up mechanically, placing in appropriate containers for disposal. After cleaning, flush away traces with water.

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. Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

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	Incompatible with strong acids and bases. Incompatible with oxidizing agents.

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 ³ inhalable fraction S*	TWA: 10 mg/m ³	IDLH: 10 mg/m ³ , TWA: 10 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 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. 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 When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	Liquid	Odor	Amines
Appearance	Liquid	Odor threshold	No information available
Color	Brown		
Property	Values	Remarks • Method	
pH	7.5-8.5		
Melting point/freezing point	<35 °F		
Boiling point / boiling range	101 °C / 214 °F		
Flash point	52 °C / 125 °F	Pensky-Martens Closed Cup (PMCC)	
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	1.16
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 9.62 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

Keep from freezing.

Incompatible materials

Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

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

Inhalation Irritant, moderate respiratory.

Eye contact Corrosive to eyes.

Skin Contact Moderate skin irritation.

Ingestion May cause irritation.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2,4-D, dimethylamine salt 2008-39-1	= 625 mg/kg (Rat)	= 2115 mg/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 No information available.

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		

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.

Chronic toxicity

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects. Repeated contact may cause allergic reactions in very susceptible persons.

Target Organ Effects

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

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

ATEmix (oral)	1076 mg/kg
ATEmix (dermal)	17865 mg/kg
ATEmix (inhalation-gas)	80165 mg/L
ATEmix (inhalation-dust/mist)	6.9 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

1% 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

U240 D001 See Section 2: Hazards not otherwise classified (HNOC)

14. TRANSPORT INFORMATION

DOT**Proper shipping name**

For package sizes less than 22.37 gallons: product is non-regulated.

Description

For package sizes 22.37 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 2217-2

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 the skin. Do not get in eyes or on clothing. Avoid contact with skin. 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

TSCA	Not Listed
DSL/NDSL	Not Listed
EINECS/ELINCS	Not Listed
ENCS	Not Listed
IECSC	Listed
KECL	Not Listed
PICCS	Listed
AICS	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
2,4-D, dimethylamine salt				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	Yes
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)

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

US State Regulations

U.S. State Right-to-Know Regulations

International Regulations

Mexico - Grade Moderate risk, Grade 2

16. OTHER INFORMATION

NFPA	Health hazards 3	Flammability 1	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 3	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