

Material Safety Data Sheet

Product Name: VESSEL

MSDS No.: 991-3

Version No.: 001

EPA Registration No.: 2217-656-72112

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: 8/22/2005

Chemical State: Liquid Gas Solid
Chemical Type: Pure Mixture

2. Ingredients:

Trade Secret (ND = Not Disclosed)

CAS No.	Chemical Name	% Range	EHS		IARC		SARA 313 SUB Z	OSHA PEL	ACGIH TLV	Other Limits
			NTP							
2008391	Dimethylamine Salt of 2,4-dichlorophenoxyacetic acid (2,4-D)	30.56%	N	N	Y	N	N	NI	NI	NI
2300665	Dimethylamine Salt of 3,6-dichloro-o-anisic acid (Dicamba)	2.77%	N	N	N	N	Y	NI	NI	NI
66423094	Dimethylamine Salt of R(+)-2-(2-Methyl-4-chlorophenoxy) propionic acid (MCP)	8.17%	N	N	Y	N	N	NI	NI	NI

3. Hazardous Identification:

Hazard Category:

Acute Chronic Fire Pressure Reactive

Hazardous Identification Information:

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, MCP, 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:

Eyes, Skin contact, Inhalation, Ingestion.

Health Hazards (Acute and Chronic):

EYES: Corrosive. Causes irreversible eye damage.

SKIN: Causes skin irritation.. Do not get into eyes, on skin, or on clothing.

INHALATION: Inhalation of sprays may cause burning sensations in the respiratory tract, resulting in coughing.

INGESTION: May be fatal if swallowed.

Signs and Symptoms:

Inhalation may cause burning in the chest, with coughing. Prolonged inhalation sometimes causes dizziness. Ingestion usually leads to vomiting. Pain in the chest and abdomen, and diarrhea may follow.

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

First Aid Measures (Continued)

precautions to avoid contact. (respirator, gloves, etc.)

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 eye.
- 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 do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

If inhaled:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-877-800-5556 for emergency medical treatment advice.

Other Health Warnings:

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

5. Fire Fighting Measures:

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Fire Fighting Measures (Continued)

Flash Point: 129°F **F.P. Method:** PM Closed Cup

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.

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. Run-off 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:

See Section 8 for Personal Protective Equipment. Do not touch spilled material. 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 For WPS Uses:

Containers over 1 gallon and less than 5 gallons: 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 or more gallons: Do not open-pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable 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.

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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:

NON-WPS USES:

Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) – in general, only agricultural-plant uses are covered by the WPS – must wear the following:

· Wear face shield or goggles when mixing, loading or applying this

Exposure Controls/Personal Protection (Continued)

product. When mixing, loading or applying this product, wear long-sleeved shirt, long pants, socks, shoes, chemical-resistant gloves and eye protection. It is recommended that safety glasses include front, brow, and temple protection.

After using this product, rinse gloves before removing, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water. Remove saturated clothing as soon as possible and shower.

PROTECTIVE CLOTHING: Wear long sleeves and pants; chemical-resistant gloves and shoes with socks.

EYE PROTECTION: Safety glasses with side shields or safety goggles.

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: 212°F

Melting Point: NI

Evaporation Rate (Butyl Acetate = 1) : <1

Vapor Pressure (mm Hg.): <17 @ 78 F

Vapor Density (Air = 1): >1

Specific Gravity (H₂O = 1): 1.12620

Solubility in Water: Infinite

Appearance and Odor: Brown liquid; amine odor.

Other Information:

pH = 7.5-8.5;

Density = 9.38 pounds/gallon

Freezing point <35°F

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:

Acute dermal LD50: >2000 mg/kg.

Acute oral LD50: >1500 mg/kg.

12. Ecological Information:

ENVIRONMENTAL HAZARDS:

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. 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. When cleaning equipment, do not pour the washwater on the ground; spray or drain over a large area away from wells and other water sources. Do not apply when weather conditions favor drift from target area. Do not contaminate domestic or irrigation waters.

Most cases of groundwater contamination involving phenoxy herbicides

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Ecological Information (Continued)

such as 2,4-D and MCPP have been associated with mixing, loading and disposal sites. Caution should be exercised when handling 2,4-D and MCPP 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 Metal Containers - 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. For Plastic Containers - 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.

14. Transport Information:

The following guidelines 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 41.32 gallons: product is non-regulated.
For package sizes 41.32 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.

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

CERCLA REPORTABLE QUANTITY: 327 pounds of the formulation which contains 100 pounds of Dimethylamine 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: Dimethylamine dicamba CAS# 2300-66-5

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 261.20-24)

16. Other Information:

REASON FOR ISSUE: New MSDS in the ANSI Z400.1-1998 format

Other Information (Continued)

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.