

Material Safety Data Sheet

Product Name: TZONE Broadleaf Herbicide For Tough Weeds

MSDS No.: 825-6

Version No.: 001

EPA Registration No.: 2217-920

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: 4/14/2009

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							
1928434	2,4-Dichlorophenoxyacetic acid, isooctyl (2-ethylhexyl) ester	31.82%	N	N	Y	N	Y	NI	NI	NI
1918009	3,6-Dichloro-o-anisic acid (Dicamba)	2.43%	N	N	N	N	Y	NI	NI	NI
122836355	Sulfentrazone	0.73%	N	N	N	N	N	NI	NI	NI
64700567	Triclopyr 2-butoxyethyl ester	8.40%	N	N	N	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, 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:
 Eyes, Skin contact, Inhalation, Ingestion.

Health Hazards (Acute and Chronic):
 Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Harmful 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. Headache, mental confusion, and bizarre behavior are early manifestations of severe poisoning, which may progress to unconsciousness.

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.)

Emergency First Aid Procedure:
 If in eyes:

First Aid Measures (Continued)

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 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on skin or on clothing:
 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 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.

Other Health Warnings:
 NOTE TO PHYSICIAN: Contains petroleum distillates - vomiting may cause aspiration pneumonia.

5. Fire Fighting Measures:

Flash Point: 214°F **F.P. Method:** PM Closed Cup

Lower Explosive Limit: NI

Upper Explosive Limit: NI

Fire Extinguishing Media:
 Foam, CO2, dry chemical, water.

Material Safety Data Sheet

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Fire Fighting Measures (Continued)

Special Fire Fighting Procedures:

Wear positive-pressure breathing apparatus and full protective clothing. Fight fire from maximum distance. 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:

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.

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

Other Precautions:

WARNING: Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear such as safety glasses. Harmful if swallowed. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

8. Exposure Controls/Personal Protection:

Ventilation Requirements:

Good local ventilation is recommended; mechanical ventilation may be used if exposure limits may be exceeded.

Personal Protective Equipment:

Some materials that are chemical-resistant to this product are natural rubber. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators and other handlers must wear:

protective eyewear,
long-sleeved shirt and long pants,
shoes and socks, plus
chemical-resistant gloves (except for applicators using ground boom equipment) and
chemical-resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

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.

9. Physical and Chemical Properties:

Physical and Chemical Properties (Continued)

Boiling Point: NI

Melting Point: NI

Evaporation Rate (Butyl Acetate = 1) : NI

Vapor Pressure (mm Hg.): NI

Vapor Density (Air = 1): NI

Specific Gravity (H2O = 1): 0.98900

Solubility in Water: Emulsifiable

Appearance and Odor: Pale yellow liquid with a fruity or turpentine odor

Other Information:

Density = 8.25 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, organo chlorides, nitrogen oxides, and carbon monoxide when burning.

Hazardous Polymerization:

Will not occur.

11. Toxicological Information:

Acute Oral Toxicity: LD50 = 3,129 mg/kg bodyweight in rats.

Acute Dermal Toxicity: LD50 >5,000 mg/kg bodyweight in rats.

Acute Inhalation: LC50 >2.06 mg/L in rats.

Primary Eye Irritation: Mild eye irritant.

Primary Skin Irritation: Moderately irritating to the skin.

Dermal Sensitization: The test substance is not considered to be a skin sensitizer

12. Ecological Information:

This pesticide may be 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.

These chemicals (triclopyr, 2,4-D and dicamba) have properties and characteristics associated with chemicals detected in groundwater. The use of these chemicals 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.

13. Disposal Considerations:

Material Safety Data Sheet

Product Name: TZONE Broadleaf Herbicide For Tough Weeds

MSDS No.: 825-6

Version No.: 001

EPA Registration No.: 2217-920

Disposal Considerations (Continued)

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

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

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. 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.

[For Plastic Containers - Nonrefillable with capacities equal to or less than 5 gallons:]

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse [or pressure rinse] container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

[Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.]

[For Plastic Containers - Nonrefillable with capacities greater than 5 gallons:]

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse [or pressure rinse] container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

[Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.]

[For Refillable Containers:]

CONTAINER HANDLING: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Container cleaning: Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before

Disposal Considerations (Continued)

refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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 49.46 gallons: product is non-regulated.
For package sizes 49.46 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: 314 pounds of the formulation which contains 100 pounds of 2,4-D 2-ethylhexyl ester

SARA TITLE III:

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: None
SECTION 311/312 HAZARD CATEGORIES: Immediate Health Hazard, Delayed Health Hazard
SECTION 313 TOXIC CHEMICALS: Dicamba CAS# 1918-00-9

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 Z400.1-1989 format

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

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Other Information (Continued)

sources to assure both the proper use of the material described herein and the safety and health of employees.