

# Material Safety Data Sheet

Product Name: Q4 Plus Turf Herbicide for Grassy & Broadleaf Weeds

MSDS No.: 697-6

Version No.: 001

EPA Registration No.: 2217-930

## 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: 10/22/2009

**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							
84087014	3,7-Dichloroquinoline-8-carboxylic acid (Quinclorac)	8.43%	N	N	N	N	N	NI	NI	NI
2008391	Dimethylamine Salt of 2,4-dichlorophenoxyacetic acid (2,4-D)	11.81%	N	N	Y	N	N	NI	NI	NI
2300665	Dimethylamine Salt of 3,6-dichloro-o-anisic acid (Dicamba)	1.49%	N	N	N	N	Y	NI	NI	NI
122836355	Sulfentrazone	.69%	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:**  
 Skin contact, Inhalation, Ingestion.

**Health Hazards (Acute and Chronic):**  
 EYES: May cause mild eye irritation.

SKIN: Moderately irritating to the skin.

**INHALATION:** Moderately irritating to the mucous membranes. Inhalation of sprays may cause burning sensations in the respiratory tract, resulting in coughing.

**INGESTION:** May irritate the gastrointestinal tract.

**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.

### First Aid Measures (Continued)

**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 swallowed:  
 • Call a poison control center or doctor immediately for treatment advice.  
 • Do not induce vomiting unless told to by a poison control center or doctor.  
 • Have person sip a glass of water if able to swallow.  
 • Do not give anything by mouth to an unconscious person.

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 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:**  
 NI

## 5. Fire Fighting Measures:

**Flash Point:** 138°F **F.P. Method:** PM Closed Cup

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## Fire Fighting Measures (Continued)

Lower Explosive Limit: NI

Upper Explosive Limit: NI

### Fire Extinguishing Media:

Foam, CO<sub>2</sub>, 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. 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:

#### 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.

### Other Precautions:

## 8. Exposure Controls/Personal Protection:

### Ventilation Requirements:

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are natural rubber, natural rubber blends and laminates. 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:

- long-sleeved shirt and long pants,
- shoes and socks,
- 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.

### Personal Protective Equipment:

#### User Safety Requirements

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### User Safety Recommendations

- Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## 9. Physical and Chemical Properties:

Boiling Point: 212° F

Melting Point: NI

Evaporation Rate (Butyl Acetate = 1) : <1

Vapor Pressure (mm Hg.): <17@68°F

Vapor Density (Air = 1): >1

Specific Gravity (H<sub>2</sub>O = 1): 1.06595

Solubility in Water: Infinite

Appearance and Odor: Brown liquid; musky odor.

### Other Information:

pH = NI

Density = 8.89 pound/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:

Mild eye irritant.

## 12. Ecological Information:

### Environmental Hazards

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.

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.

## 13. Disposal Considerations:

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## Disposal Considerations (Continued)

**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 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

## Disposal Considerations (Continued)

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: PESTICIDES, NOI, INCLUDING DEFOLIANTS, FUNGICIDES, HERBICIDES, OR INSECTICIDES NMFC 155050-6

Proper Shipping Name:

For package sizes less than 113 gallons: product is non-regulated.

For package sizes 113 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:** 832 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

**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.