

Issue Date 08-Oct-2014

Revision Date 10-Apr-2019

Version 3

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

**Product identifier.**

**Product Name** Barrier® 50W Dichlobenil Herbicide

**Other means of identification**

**Product Code** PBI FP 5073038

**EPA Pesticide Registration Number** 2217-676

**Product Size** 100 U. S. Lb.

**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 Address**

PBI-Gordon Corporation  
P.O. Box 860350  
Shawnee, KS 66286

**Company Name**

PBI-Gordon Corporation  
P.O. Box 860350  
Shawnee, KS 66286

**Manufacturer**

PBI-Gordon Corporation  
P.O. Box 860350  
Shawnee, KS 66286

**Emergency telephone number**

**24 Hour Emergency Phone Number** 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
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1
Chronic Aquatic Toxicity	Category 2

**Label elements**

**Emergency Overview**

**Signal word**

Danger

**Hazard statements**

- Harmful in contact with skin
- May cause cancer
- Causes damage to organs through prolonged or repeated exposure
- Toxic to aquatic life with long lasting effects



**Appearance** Powder

**Physical state** Solid

**Odor** Aromatic

**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
IF ON SKIN: Wash with plenty of water and soap  
Call a POISON CENTER or doctor if you feel unwell  
Take off contaminated clothing and wash it before reuse

**Precautionary Statements - Storage**

Store locked up

**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.

**Other information**

Not applicable

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

Not applicable.

**Mixture**

Chemical name	CAS No	Weight-%
2,6-Dichlorobenzonitrile	1194-65-6	50
Trade Secret	Trade secret	35-40%
Trade Secret	Trade secret	0.1-1%

\* The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**Description of first aid measures**

<b>General advice</b>	Do not get in eyes, on skin, or on clothing. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician.
<b>Inhalation</b>	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. Call a physician.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
<b>Self-protection of the first aider</b>	Do not breathe dust/fume/gas/mist/vapors/spray. Wear personal protective clothing (see section 8).

**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** Foam. Carbon dioxide (CO2). Dry chemical. Water.

**Unsuitable extinguishing media** No information available.

**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.

**Special protective equipment for fire-fighters** 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** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.

**Environmental precautions**

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas Do not flush into surface water or sanitary sewer system See Section 12 for additional ecological information Avoid release to the environment Collect spillage

**Other information** Refer to protective measures listed in Sections 7 and 8.

**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** Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. 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. Avoid creating dust. Clean contaminated surface thoroughly.

**7. HANDLING AND STORAGE****Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

**Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Trade Secret	TWA: 2 mg/m <sup>3</sup> particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Trade Secret	TWA: 0.025 mg/m <sup>3</sup> respirable particulate matter	TWA: 50 µg/m <sup>3</sup> TWA: 50 µg/m <sup>3</sup> excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m <sup>3</sup> respirable dust : (250)/( %SiO <sub>2</sub> + 5) mppcf TWA respirable fraction : (10)/( %SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)  
Ceiling Maximum limit value \* Skin designation

**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**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Hand protection**

Chemical resistant gloves.

**Skin and body protection**

Wear suitable 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**

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

**Physical state** Solid  
**Appearance** Powder  
**Color** Tan  
**Odor** Aromatic  
**Odor threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known

<b>Melting point/freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability limit:</b>	No data available	
<b>Lower flammability limit:</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Specific Gravity</b>	No data available	None known
<b>Water solubility</b>	Suspended in water	
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known

**Other Information**

<b>Oxidizing properties</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	Loose: 23 pounds per cubic feet Packed: 50 pounds per cubic feet

<b>10. STABILITY AND REACTIVITY</b>
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**Reactivity**

No information available

**Stability**

Stable under recommended storage conditions

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous polymerization**

Will not occur.

**Conditions to avoid**

Keep out of reach of children.

**Incompatible materials**

None known based on information supplied.

**Hazardous decomposition products**

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

<b>11. TOXICOLOGICAL INFORMATION</b>
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**Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	May be harmful if inhaled.
<b>Eye contact</b>	May cause irritation.
<b>Skin contact</b>	May be absorbed through the skin in harmful amounts. Harmful in contact with skin.
<b>Ingestion</b>	May be harmful if swallowed.

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
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2,6-Dichlorobenzonitrile 1194-65-6	= 2710 mg/kg ( Rat ) = 4250 mg/kg ( Rat )	= 1350 mg/kg ( Rabbit ) > 2000 mg/kg ( Rabbit )	> 250 mg/m <sup>3</sup> ( Rat ) 4 h
Trade Secret	> 5000 mg/kg ( Rat )	> 5000 mg/kg ( Rat )	-

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** No information available.

**Acute toxicity****Numerical measures of toxicity - Product Information**

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

**ATEmix (oral)** 73838 mg/kg  
**ATEmix (dermal)** 1300 mg/kg

**Unknown Toxicity**

89 % of the mixture consists of ingredient(s) of unknown toxicity  
 89 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
 89 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)  
 89 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**LD50 Oral** 4970 mg/kg (rat)  
**LD50 Dermal** > 2,000 mg/kg

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Trade Secret	A2	Group 1	Known	X

**Legend**

**ACGIH (American Conference of Governmental Industrial Hygienists)**

A2 - Suspected Human Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

**NTP (National Toxicology Program)**

Known - Known Carcinogen

**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.

**Target Organ Effects** Eyes, lungs, Respiratory system, Gastrointestinal tract (GI).

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2,6-Dichlorobenzonitrile 1194-65-6	-	9.1 - 12.3: 96 h Cyprinus carpio mg/L LC50 semi-static 3.83 - 6.34: 96 h Oncorhynchus mykiss mg/L LC50 static 10: 96 h Lepomis macrochirus mg/L LC50 5.02 - 8.98: 96 h Lepomis macrochirus mg/L LC50 static 3.98 - 9.07: 96 h Pimephales promelas mg/L LC50 static 18: 96 h Oncorhynchus mykiss mg/L LC50	-	6.2: 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

**Waste from residues/unused products** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not reuse empty containers.

### 14. TRANSPORT INFORMATION

**Note:** Products under 200 lbs. not regulated by DOT. Below are designations for products over 200 lbs. See RQ

#### DOT

**UN/ID no.** UN3077  
**Proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**Hazard class** 9  
**Packing group** III  
**Reportable Quantity (RQ)** 2,6-DICHLOROBENZONITRILE: RQ (lb)= 200.00  
**Special Provisions** 146, 335, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33, 8  
**Description** UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,6-DICHLOROBENZONITRILE), 9, III, RQ

#### TDG

**UN/ID no.** UN3077  
**Proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**Hazard class** 9  
**Packing group** III  
**Description** UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,6-DICHLOROBENZONITRILE), 9, III

#### MEX

**UN/ID no.** UN3077  
**Proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**Hazard class** 9  
**Special Provisions** 274, 331, 335  
**Packing group** III  
**Description** UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(2,6-DICHLOROBENZONITRILE), 9, III

**ICAO (air)**

<b>UN/ID no.</b>	UN3077
<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<b>Hazard class</b>	9
<b>Packing group</b>	III
<b>Special Provisions</b>	A158, A97, A179, A197
<b>Description</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,6-DICHLOROBENZONITRILE), 9, III

**IATA**

	Limited quantity applies when the inner packaging weight is less than 5kg and the gross package weight is less than 30kg.
<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<b>Transport hazard class(es)</b>	9
<b>Packing group</b>	III
<b>Special Provisions</b>	A158, A179, A97, A197
<b>Description</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,6-DICHLOROBENZONITRILE), 9, III

**IMDG**

	Limited quantity applies when the inner packaging weight is less than 5kg and the gross package weight is less than 30kg.
<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Transport hazard class(es)</b>	9
<b>Packing group</b>	III
<b>EmS-No.</b>	F-A, S-F
<b>Special Provisions</b>	274, 335, 966, 967, 969
<b>Description</b>	UN3077, Environmentally hazardous substance, solid, n.o.s. (2,6-Dichlorobenzonitrile), 9, III

<b>15. REGULATORY INFORMATION</b>
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**U.S. EPA Label Information****EPA Pesticide Registration Number** 2217-676**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**

Caution

Keep out of the reach of children

PRECAUTIONARY STATEMENTS

Hazards to Humans &amp; Domestic Animals

CAUTION: Harmful if swallowed or absorbed through skin or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing dust.

Environmental Hazards

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 washwaters. 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.

**International Inventories**

<b>TSCA</b>	Listed
<b>DSL/NDL</b>	Not Listed
<b>EINECS/ELINCS</b>	Not Listed
<b>ENCS</b>	Not Listed



IECSC	Listed
KECL	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

**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**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**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).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
2,6-Dichlorobenzonitrile 1194-65-6	100 lb	-	-	X

**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	Extremely Hazardous Substances RQs
2,6-Dichlorobenzonitrile 1194-65-6	100 lb	-

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
2,6-Dichlorobenzonitrile 1194-65-6	X	X	X
Trade Secret	X	X	X
Trade Secret	X	X	X
Trade Secret	X	X	X

**16. OTHER INFORMATION**

<b>NFPA</b>	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical Properties -
<b>HMIS</b>	Health hazards 1*	Flammability 0	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

**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**