

Issue Date 17-May-2016

Revision Date 08-Sep-2025

Version 1

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

Product identifier.

Product Name Brush Killer for Hard-to-Kill Brush

Other means of identification

Product Code PBI FP 251-3

EPA Pesticide Registration Number 2217-952

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

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 Inhalation Toxicity - Gases	Category 3
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Serious eye damage/eye irritation	Category 2A
Skin Sensitization	Category 1
Carcinogenicity	Category 2
Aspiration hazard	Category 1
Acute Aquatic Toxicity	Category 2
Chronic Aquatic Toxicity	Category 2

Label elements

Emergency Overview

Signal word

Danger

Hazard statements

- Toxic if inhaled
- Causes serious eye irritation
- May cause an allergic skin reaction
- Suspected of causing cancer
- Toxic to aquatic life with long lasting effects
- May be fatal if swallowed and enters airways

**Appearance** Liquid**Physical state** Liquid**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
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of water and soap
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
Call a POISON CENTER or doctor
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other information

May be harmful if swallowed. May be harmful in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Not applicable.

Mixture

Chemical name	CAS-No	Weight-%
Trade Secret	Trade secret	15-40
2,4-D 2-Ethylhexyl ester	1928-43-4	15.97
Triclopyr BEE, butoxyethyl ester	64700-56-7	8.40
Trade Secret	Trade secret	1-5
Trade Secret	Trade secret	1-5
Dicamba	1918-00-9	1.22

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

4. FIRST AID MEASURES**Description of first aid measures**

General advice	If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, 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	Move to fresh air in case of accidental inhalation of vapors or decomposition products. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If symptoms persist, call a physician.
Ingestion	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.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms	No information available
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically. Contains petroleum distillate - vomiting may cause aspiration pneumonia.
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5. FIRE-FIGHTING MEASURES

<u>Suitable Extinguishing Media</u>	Foam. Carbon dioxide (CO2). Dry chemical. Water fog.
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<u>Unsuitable extinguishing media</u>	No information available.
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<u>Specific hazards arising from the chemical</u>	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.
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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. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas Do not flush into surface water or sanitary sewer system Prevent product from entering drains Prevent further leakage or spillage if safe to do so See Section 12 for additional ecological information

Other information

For further specification, refer to section 8 of the SDS.

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. Dam up. Cover liquid spill with sand, earth or other noncombustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep from freezing.

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: 20 ppm	TWA: 100 ppm TWA: 300 mg/m ³ (vacated) S* (vacated) Ceiling: 50 ppm (vacated) Ceiling: 150 mg/m ³	IDLH: 1400 ppm Ceiling: 50 ppm Ceiling: 150 mg/m ³

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**

Tight sealing safety goggles. Face protection shield.

Hand protection

Wear suitable gloves. 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

When using do not eat, drink or smoke. Remove and wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Color	Amber
Odor	Aromatic
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point/freezing point		None known
Boiling point / boiling range	No data available	None known
Flash point	> 100 °C / 212 °F	Pensky-Martens Closed Cup (PMCC)
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	0.93210	
Water solubility	Emulsifiable	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known

Other Information

Liquid Density	7.77 pounds/gallon
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Stability

No information available

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

May emit toxic fumes under fire conditions. Hydrogen chloride. Nitrogen oxides (NOx). Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Eye contact	May cause irritation. Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Repeated exposure may cause skin dryness or cracking. Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. May be harmful in contact with skin.
Ingestion	Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Trade Secret	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
2,4-D 2-Ethylhexyl ester 1928-43-4	= 300 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.4 mg/L (Rat) 4 h
Trade Secret	= 1870 µL/kg (Rat)	-	-
Trade Secret	= 700 mg/kg (Rat)	= 3402 mg/kg (Rabbit)	> 8000 ppm (Rat) 4 h
Dicamba 1918-00-9	= 1039 mg/kg (Rat)	= 1716 mg/kg (Rabbit)	> 5.14 mg/L (Rat) 4 h

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 (inhalation-gas) 1199 mg/L

Unknown Toxicity

44 % of the mixture consists of ingredient(s) of unknown toxicity

44 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

44 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

LD50 Oral 3129 mg/kg (female rats)
LD50 Dermal > 5000 mg/kg (female rats) (male rats)
LC50 Inhalation (DUST) > 2.06 mg/L (female rats) (male rats)

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

Skin corrosion/irritation	May cause skin irritation.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation.
Respiratory or skin sensitization	May cause sensitization by skin contact.
Germ cell mutagenicity	No information available.
Carcinogenicity	Classification based on data available for ingredients.

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

Chemical name	ACGIH	IARC	NTP	OSHA
2,4-D 2-Ethylhexyl ester 1928-43-4	-	Group 2B	-	X

Legend

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

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	Respiratory system, Eyes, Skin, Central nervous system.
Aspiration hazard	May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Trade Secret	-	2.2: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 2.4: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 45: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through	-	-
2,4-D 2-Ethylhexyl ester 1928-43-4	-	6 - 8.7: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 11.5: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 7.8: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static	-	-
Trade Secret	-	1.8: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50	-	-
Trade Secret	500: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 500: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50	100000 - 500000: 96 h <i>Lepomis macrochirus</i> µg/L LC50 static 1730 - 1910: 96 h <i>Pimephales promelas</i> mg/L LC50 static 1740: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 1910000: 96 h <i>Pimephales</i>	EC50 = 2041.4 mg/L 5 min EC50 = 2186 mg/L 30 min EC50 = 3980 mg/L 24 h EC50 = 4400 mg/L 17 h	1897 - 2072: 48 h <i>Daphnia magna</i> mg/L EC50 Static 1983: 48 h <i>Daphnia magna</i> mg/L EC50

		promelas µg/L LC50 static		
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Persistence and degradability No information available.

Bioaccumulation No information available.
Component Information

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

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO (air) Limited quantity applies with an inner packaging less than 5 L or gross package weight less than 30 kg.
UN/ID no. UN3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class 9
Packing group III
Special Provisions A97, A158, A197, A215
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D), 9, PGIII, LIMITED QUANTITY

IATA Limited quantity applies with an inner packaging less than 5 L or gross package weight less than 30 kg.
UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport hazard class(es) 9
Packing group III
Special Provisions A97, A158, A197, A215
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D), 9, PGIII, LIMITED QUANTITY

IMDG Limited quantity applies with an inner packaging less than 5 L or gross package weight less than 30 kg.
UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport hazard class(es) 9
Packing group III
EmS-No. F-A, S-F
Special Provisions 274, 335, 375, 969
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D), 9, III, MARINE POLLUTANT

15. REGULATORY INFORMATION

U.S. EPA Label Information

EPA Pesticide Registration Number 2217-952

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 reach of children **Hazards to Humans and Domestic Animals Caution:** Causes Moderate eye irritation. Avoid contact with eyes, skin, or clothing **Harmful if swallowed.** 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 water 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 soil 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/NDL	Not Listed
EINECS/ELINCS	Listed
ENCS	Not Listed
IECSC	Not Listed
KECL	Not Listed
PICCS	Not Listed
AICS	Not Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - 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 contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
2,4-D, 2-ethylhexyl ester - 1928-43-4	0.1
Triclopyr BEE, butoxyethyl ester - 64700-56-7	1.0
Trade Secret -	1.0
Dicamba - 1918-00-9	1.0

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	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous
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	Quantities			Substances
2,4-D 2-Ethylhexyl ester 1928-43-4	100 lb	-	-	-
Dicamba 1918-00-9	1000 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
2,4-D 2-Ethylhexyl ester 1928-43-4	100 lb	-
Trade Secret	5000 lb	-
Dicamba 1918-00-9	1000 lb	-

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

Chemical name	New Jersey	Massachusetts	Pennsylvania
2,4-D 2-Ethylhexyl ester 1928-43-4	X	-	-
Triclopyr BEE, butoxyethyl ester 64700-56-7	X	-	X
Trade Secret	X	X	X
Dicamba 1918-00-9	X	X	X

16. OTHER INFORMATION

NFPA	Health hazards 2	Flammability 1	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 2	Flammability 1	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>		* = Chronic Health Hazard		

Disclaimer

The information provided in this 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