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Version 1

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

Product identifier.

Product Name SpeedZone® Southern EW Broadleaf Herbicide for Turf

Other means of identification

Product Code PBI FP 8741107

EPA Pesticide Registration Number 2217-1031

Product Size 8 fl. oz.

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 Oral Toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Sensitization	Category 1
Carcinogenicity	Category 1A
Acute Aquatic Toxicity	Category 2
Chronic Aquatic Toxicity	Category 2

Label elements

Emergency Overview

Signal word

Danger

Hazard statements

- Harmful if swallowed or if inhaled
- May cause an allergic skin reaction
- May cause cancer
- Toxic to aquatic life with long lasting effects



Appearance Liquid

Physical state Liquid

Odor Peppermint

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
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response

IF exposed or concerned: 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
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
Rinse mouth

Precautionary Statements - Storage

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

Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS-No	Weight-%
2,4-D, 2-ethylhexyl ester	1928-43-4	9.02
2,4-DP-p, 2-ethylhexyl ester	865363-39-9	5.19
3,6-Dichloro-o-anisic acid (Dicamba)	1918-00-9	0.59
Carfentrazone-ethyl	128639-02-1	0.47
Trade Secret	Trade secret	0.1-1.0*

* 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 exposed or concerned: Get medical advice/attention.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation Remove to fresh air. 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.

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 May cause sensitization in susceptible persons. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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. Product is or contains a sensitizer.

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. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so Prevent product from entering drains Do not flush into surface water or sanitary sewer system See Section 12 for additional ecological information Avoid release to the environment Dispose of contents/container to an approved waste disposal plant 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 Pick up and transfer to properly labeled containers.

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. Do not breathe dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2,4-D, 2-ethylhexyl ester 1928-43-4	TWA: 10 mg/m ³ inhalable fraction S*	TWA: 10 mg/m ³	IDLH: 100 mg/m ³ , TWA: 10 mg/m ³
Carfentrazone-ethyl 128639-02-1	TWA: 1 mg/m ³ inhalable particulate matter	-	-
Trade Secret	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ TWA: 50 µg/m ³ excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

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 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 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 Liquid
Appearance Liquid
Color Milky white
Odor Peppermint
Odor threshold No information available

Property	Values	Remarks • Method
pH	6.0-7.5	

Melting point/freezing point		None known
Boiling point / boiling range	> 93 °C / 199 °F	
Flash point	> 99 °C / 210 °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	1.019	
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	8.1 - 8.5 pounds/gallon
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No information available.

Stability

No information available

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Keep out of reach of children.

Incompatible materials

None known based on information supplied.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Harmful if inhaled.
Eye contact	Not expected to cause eye irritation.
Skin contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	Harmful if swallowed.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2,4-D, 2-ethylhexyl ester 1928-43-4	= 300 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.4 mg/L (Rat) 4 h
3,6-Dichloro-o-anisic acid	= 1039 mg/kg (Rat)	= 1716 mg/kg (Rabbit)	-

(Dicamba) 1918-00-9			
Carfentrazone-ethyl 128639-02-1	= 5143 mg/kg (Rat)	> 4000 mg/kg (Rat)	= 5.09 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 .

Unknown Toxicity

22 % of the mixture consists of ingredient(s) of unknown toxicity

LD50 Oral 1750 mg/kg (female rats)
LD50 Dermal > 5000 mg/kg (rat)
LC50 Inhalation (DUST) > 2.07 mg/L (rat)

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 May cause sensitization by skin contact.
Germ cell mutagenicity No information available.

Carcinogenicity 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.

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

Group 2B - Possibly 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.

12. ECOLOGICAL INFORMATION

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2,4-D, 2-ethylhexyl ester 1928-43-4	-	6 - 8.7: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 11.5: 96 h Lepomis macrochirus mg/L LC50 static 7.8: 96 h Oncorhynchus mykiss mg/L LC50 static	-	-

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 130 gallons not regulated by DOT. Below are designations for products over 130 gallons. See RQ

DOT

UN/ID no. UN3082
 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard class 9
 Packing group III
 Reportable Quantity (RQ) 2,4-D, 2-ethylhexyl ester: RQ (lb)= 1109.00=130 gallons
 Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29
 Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D, 2-ethylhexyl ester), 9, III, Marine pollutant

TDG

UN/ID no. UN3082
 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard class 9
 Packing group III
 Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D, 2-ethylhexyl ester), 9, III

MEX

UN/ID no. UN3082
 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Hazard class 9
 Special Provisions 274, 331, 335
 Packing group III
 Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D, 2-ethylhexyl ester), 9, III

ICAO (air)

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
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D, 2-ethylhexyl ester), 9, III

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
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D, 2-ethylhexyl ester), 9, III

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, 969
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D, 2-ETHYLHEXYL ESTER), 9, III, MARINE POLLUTANT

15. REGULATORY INFORMATION

U.S. EPA Label Information

EPA Pesticide Registration Number 2217-1031

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

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed. Avoid contact with skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Environmental Hazards: This pesticide is toxic to fish and aquatic invertebrates and may adversely affect nontarget plants. 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. Groundwater Advisory: 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.

International Inventories

TSCA	Not Listed
DSL/NDSL	Not Listed
EINECS/ELINCS	Not 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/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 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

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
2,4-D, 2-ethylhexyl ester 1928-43-4	100 lb	-	-	-
3,6-Dichloro-o-anisic acid (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	-
3,6-Dichloro-o-anisic acid (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	-	-
Trade Secret	X	-	X
Trade Secret	X	X	X

16. OTHER INFORMATION

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

Disclaimer

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End of Safety Data Sheet