



Bonide Duraturf TOTAL Lawn Weed Control Concentrate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Bonide Duraturf TOTAL Lawn Weed Control Concentrate
Product code : 27934274

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Herbicide

1.3. Details of the supplier of the safety data sheet

Bonide Products, LLC
6301 Sutliff Road
Oriskany, NY 13424

Telephone Number: (315) 736-8231

Comment: Bonide hours of operation are 8:00 a.m. to 4:30 p.m EST.

Website: www.bonide.com

Email address: sales@bonide.com

1.4. Emergency telephone numbers (24 hour)

Medical : SafetyCall - (833) 972-1101
Spills : CHEMTREC - 1 (800) 424-9300 and/or 1 (703) 527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute toxicity - Inhalation (Dusts/Mists) 4 H332
Specific target organ toxicity (repeated exposure) 2 H373

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H332 - Harmful if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
Precautionary statements (GHS-US) : P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P271 - Use only outdoors or in a well-ventilated area.
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P319 - Get medical help if you feel unwell.
P501 - Dispose of contents/container to in accordance with local/national regulations.

2.3. Other hazards

Harmful to aquatic life

SECTION 3: Composition/information on ingredients

Mixture

Chemical Family - Triazolinones; Dinitro aniline.

Name	Product identifier (CAS No)	%
Prodiamine	29091-21-2	2.73
Sulfentrazone	122836-35-5	1.36
Glycerin*	56-81-5	1 - 5
Propylene glycol*	57-55-6	< 1

* Exact amounts are not given due to being a trade secret.

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SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the person to rest. 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 further treatment advice.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : None known.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection and protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container.
- Incompatible products : None known

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Glycerin 56-81-5	-	TWA: 15 mg/m3 TWA: 5 mg/m3	-

Engineering measures: Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

8.2. Exposure controls

Personal protective equipment	: Avoid all unnecessary exposure. Wear long-sleeved shirt, long pants, socks, and shoes.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Respiratory protection	: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
Other information	: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Yellow liquid.
Color	: Yellow.
Odor	: Characteristic.
Odor threshold	: No data available
pH	: 6.06
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 8.68 lb/gal (1.04 g/ml)
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal use conditions

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

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10.4. Conditions to avoid

Excessive heat.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None based on information supplied.

SECTION 11: Toxicological information

Product Information:

LD50 Oral	> 5000 mg/kg (rat)
LD50 Dermal	> 5000 mg/kg (rabbit)
LC50 Inhalation	> 2.09 mg/L (rat)

Serious eye damage/eye irritation	Mildly irritating (rabbit).
Skin corrosion/irritation	Slightly irritating (rabbit).
Sensitization	Non-sensitizing.

11.1. Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

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

Chronic toxicity Sulfentrazone: Prolonged exposure cause decreased hemoglobin content and hematocrit, and increased spleen weight and splenic extramedullary hematopoiesis at high doses in animal studies.

Mutagenicity Prodiamine, Sulfentrazone: Not genotoxic in laboratory studies.

Carcinogenicity Prodiamine, Sulfentrazone: No evidence of carcinogenicity from animal studies.

Neurological effects Sulfentrazone: Clinical signs of neurotoxicity in laboratory animals was observed at high dose levels.

Reproductive toxicity Prodiamine, Sulfentrazone: No toxicity to reproduction in animal studies.

Developmental toxicity Sulfentrazone: Fetal weight decreased; delayed skeletal ossification observed at maternally non-toxic doses are reversible effects and a dose-response is established; malformations observed in fetuses at maternally toxic doses and consistent with the mode of action for protoporphyrongen oxidase inhibitors. Developmental toxicity testing and results were generated for sulfentrazone with toluene present as an impurity. . Prodiamine: Not teratogenic in animal studies.

STOT - single exposure Not classified.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure. Target organ effects Sulfentrazone: Hematopoietic system. Prodiamine: In long-term feeding studies with prodiamine, the NOEL was 200 ppm in rats, and 500 ppm in mice. Toxicity was identified in the liver and thyroid of rats at 3200 ppm, where decreased body-weight gains, liver enlargement and alterations, and species specific benign thyroid tumors were seen. At 5000 ppm in mice, both decreased body weight gains and increased liver weights were reported, but no compound related tumors were observed.

Neurological effects Sulfentrazone: Clinical signs of neurotoxicity in laboratory animals was observed at high dose levels.

Aspiration hazard No information available

SECTION 12: Ecological information

12.1. Ecotoxicity

5.3% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Prodiamine (29091-21-2)				
Active Ingredient(s)	Duration	Species	Value	Units
Prodiamine	LC50	Fish	> 552	ppb
	LC50	Aquatic organisms	> 658	ppb

Sulfentrazone (122836-35-5)				
Active Ingredient(s)	Duration	Species	Value	Units
Sulfentrazone	72 h EC50	Algae	32.8	mg/L
	48 h EC50	Crustacea	60.4	mg/L
	96 h LC50	Fish	94	mg/L
	21 d NOEC	Fish	5.9	mg/L
	21 d NOEC	Crustacea	0.51	mg/L

12.2. Persistence and degradability

Sulfentrazone: Persistent. Does not readily hydrolyze.

Prodiamine: Moderately persistent. Does not readily hydrolyze.

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12.3. Bioaccumulative potential

Sulfentrazone: The substance does not have a potential for bioconcentration. Log Pow - 1.5

12.4. Mobility in soil

Sulfentrazone: Mobile, Has potential to reach ground water.

Prodiamine: Half-life in soil is <57 days.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

DOT This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185. Classification below is only applicable when shipped by vessel or airplane and is not applicable when shipped by road or rail only.

ICAO/IATA

UN/ID no	UN3077
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
Packing Group	III
Description	UN3077, Environmentally hazardous substance, liquid, n.o.s. (sulfentrazone), 9, III, Marine Pollutant

IMDG/IMO

UN/ID no	UN3077
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
Packing Group	III
EmS No.	F-A, S-F
Marine Pollutant	Sulfentrazone
Description	UN3077, Environmentally hazardous substance, liquid, n.o.s. (sulfentrazone), 9, III, Marine Pollutant

SECTION 15: Regulatory information

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:

CAUTION: Causes moderate eye irritation. Harmful if inhaled, swallowed, or absorbed through skin. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact while mixing or handling may cause allergic reactions in certain individuals. Wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves (such as natural rubber, selection Category A). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

15.1. 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

Acute health hazard	Yes
Chronic health hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

SECTION 16: Other information

Other information : None.

SDS US (GHS HazCom 2012) - Pesticides

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.