



Bonide KleenUp WEED & GRASS Killer he high efficiency formula 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 KleenUp WEED & GRASS Killer he high efficiency formula concentrate
Product code : 538834694

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)

Skin corrosion/irritation 2	H315
Sensitization, skin 1	H317
Serious eye damage/eye irritation 1	H318
Acute toxicity, inhalation 4	H332

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H332 - Harmful if inhaled

Precautionary statements (GHS-US) :

P261 – Avoid breathing mist, vapors, or spray.
P264 – Wash thoroughly after handling.
P271 – Use only outdoors or in a well ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Use personal protective equipment as required.
P302 + P352 - IF ON SKIN : Wash with plenty of soap and water.
P333 + P317 - If skin irritation or rash occurs: Get medical help.
P304 + P340 + P317 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
P305 + P351 + P338 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P317 - Get medical help.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P321 - Specific treatment (see . . . on this label).
P501 - Dispose of contents/container in accordance with local/regional regulations.

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SECTION 3: Composition/information on ingredients

Mixture

Name	Product identifier (CAS No)	%
Glufosinate-ammonium	77182-82-2	5.78
Alkyl (C10-16) Ether Sulfate, Sodium Salt	68585-34-2	*

*Ingredients not listed or listed with a weight % range are considered a trade secret and are withheld under 29 CFR 1910.1200(i).

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air. Get medical advice if symptoms develop. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth if possible.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water. Get medical advice if irritation occurs and persists.
- First-aid measures after eye contact : Rinse cautiously with water for 15-20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing eye. Get medical advice if irritation occurs and persists.
- First-aid measures after ingestion : Do not induce vomiting. Call a poison control center or doctor immediately for treatment advice.

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

Serious eye irritation and possible permanent damage. Skin irritation and possible allergic reaction after repeated contact. Possible respiratory irritation.

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 : Water spray, alcohol-resistant foam, dry chemical or carbon dioxide
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition may produce toxic carbon, nitrogen and sulfur oxides.

5.3. Advice for firefighters

Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Foam and/or dry chemical are preferred to minimize environmental contamination. If water is used, dike and collect water to prevent run-off. Wear self-contained breathing apparatus and full fire-fighting turn-out gear (Bunker gear).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment. Do not touch or walk through spilled material.

6.2. Environmental precautions

Keep spilled material and any rinsate from contaminating soil or from entering sewage and drainage systems and bodies of water.

6.3. Methods and material for containment and cleaning up

Stop leak if possible. Absorb or cover with dry earth, sand, vermiculite or other inert absorbent material. Place contaminated material in appropriate container for disposal. After removal, flush contaminated area thoroughly with soap and water. Pick up wash liquid with additional absorbent and place in a disposable container. Do not put spilled material back in the original container.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Wear appropriate protective equipment. Avoid contact with eyes, skin or clothing. Avoid release to the aquatic environment.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : RECOMMENDATIONS ARE INTENDED FOR MANUFACTURING, PACKAGING AND COMMERCIAL BLENDING WORKERS. PESTICIDE APPLICATORS AND WORKERS must refer to the product label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Handle and open container in a manner as to prevent spillage. Do not eat, drink or smoke while handling this product. Immediately wash off accidental splashes of the concentrate or spray mixture from skin, clothing and out of eyes.
- Incompatible materials : Strong oxidizing agents.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Users of a pesticide product must refer to the product label for personal protective equipment requirements.

Exposure Guidelines: No components listed for OSHA PEL, ACGIH TLV, NIOSH REL.

8.2. Exposure controls

Engineering Controls	: Use general ventilation.
Hand protection	: Wear appropriate chemical gloves, such as barrier laminate, butyl rubber, nitrile, neoprene rubber, polyvinyl chloride (PVC) or Viton, to avoid skin contact.
Eye protection	: Wear goggles or safety glasses and full-face shield.
Respiratory protection	: In areas of poor ventilation, use a NIOSH approved respirator with cartridges/canisters approved for pesticides.
Other information	: Wear long-sleeved shirt, long pants and chemical resistant shoes plus socks. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately after handling this product. Wash outside of gloves before removing. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear to yellow liquid
Odor	: Mild chemical
Odor threshold	: Not determined
pH	: 7.0 - 8.0
Relative evaporation rate (butyl acetate=1)	: No data available
Melting/Freezing point	: No data available
Initial Boiling Point and Boiling Range	: Not determined
Flash point	: >200°F (>9.333°C)
Upper/Lower Flammability Limits	: Not determined
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not determined
Vapor pressure	: Not determined
Relative density at 24 °C	: 1.035 (typical)
Solubility	: Soluble in water
Partition Coefficient: n-octanol/water	: Not determined
Viscosity	: Not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Not normally reactive under conditions of normal use.

10.2. Chemical stability

Stable under normal temperatures and pressures.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

None known

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Thermal decomposition may produce carbon, nitrogen and sulfur oxides.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely Routes of Exposure:	Eye contact, Skin contact, Inhalation, Ingestion
Symptoms of Exposure:	Serious eye irritation and possible permanent damage. Skin irritation and possible allergic reaction after repeated contact. Possible respiratory irritation.
Oral LD50:	6,000 mg/kg (rat) (Based upon composition information)
Dermal LD50:	6,000 mg/kg (rat) (Based upon composition information)
Inhalation LC50:	4.0 mg/L (4-hr)(rat) (Based upon composition information)
Eye Irritation/Damage:	Severe irritant (rabbit) (Based upon composition information)
Skin Corrosion/Irritation:	Moderately irritating (rabbit) (Based upon composition information)
Skin Sensitization:	Possible sensitizer (guinea pig) (Based upon composition information)
Chronic/Subchronic Toxicity:	No data available
Mutagenicity:	No data available
Reproductive Toxicity:	No data available
Neurotoxicity:	No data available
Target Organs:	No data available
Aspiration Hazard:	Not anticipated to be an aspiration hazard.
Carcinogenicity:	No components listed for OSHA PEL, ACGIH TLV, NIOSH REL.

SECTION 12: Ecological information

12.1. Toxicity

The data presented below is on the technical glufosinate-ammonium.

Fish Toxicity:	No data available
Aquatic Invertebrate Toxicity:	No data available
Aquatic Plant Toxicity:	No data available
Avian Toxicity:	Mallard duck: Oral LD50 >2,000 mg/kg
Bobwhite quail:	Oral LD50 >2,000 mg/kg
Honeybee Toxicity:	Oral LD50 >100 µg/bee

12.2. Persistence and Degradability

Glufosinate is moderately persistent with a soil half-life of 30 - 180 days depending on soil type and weather conditions. It is very mobile in certain soil types with potential to contaminate ground water.

12.3. Mobility in Soil

No data available

12.4. Other Adverse Effects

No data available

SECTION 13: Disposal considerations

13.1. Waste Treatment Methods

Product Waste	: Refer to the pesticide label for full information on disposal. Pesticide wastes are toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of Federal law. If these wastes cannot be used 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 in proper disposal methods.
Packaging Waste	: Nonrefillable container. Do not reuse or refill this container. When possible, triple rinse the container and offer for recycling if available.
RCRA Characteristics	: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

SECTION 14: Transport information

Not regulated for transport by DOT.

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 swallowed or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

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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 clean equipment or dispose of equipment washwaters in a manner that will contaminate water resources or arable land. Glufosinate ammonium and its degradates have those properties normally associated with pesticides that have been detected in groundwater. Use of this product in areas with coarse soils and high water tables may result in groundwater contamination.

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.