



# Bonide Ground Force Vegetation Killer 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 : Ground Force Vegetation Killer Concentrate  
Product code : 2287134

#### 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, Inc.  
6301 Sutliff Road  
Oriskany, NY 13424  
T (315) 736-8231  
[www.bonide.com](http://www.bonide.com)

#### 1.4. Emergency telephone number

Emergency number : 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)

Flam. Liq. 4 H227  
Eye Dam. 1 H318

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger  
Hazard statements (GHS-US) : H227 - Combustible liquid  
H318 - Causes serious eye damage  
Precautionary statements (GHS-US) : P210 - Keep away from ignition sources. - No smoking  
P280 - Wear gloves  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor/physician  
P370+P378 - In case of fire: Use water spray, dry chemical, carbon dioxide or alcohol foam for extinction  
P403+P235 - Store in a well-ventilated place. Keep cool  
P501 - Dispose of contents/container to in accordance with local/national regulations

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-US)

No data available

### SECTION 3: Composition/information on ingredients

#### Mixture

Name	Product identifier	%	Classification (GHS-US)
Glyphosate	(CAS No) 1071-83-6	5.03	Eye Dam. 1, H318 Aquatic Chronic 2, H411
Imazapyr	(CAS No) 81334-34-1	0.089	Aquatic Chronic 3, H412

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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 for breathing. Allow the person to rest.
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 cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
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 after eye contact	: Causes serious eye damage.
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#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### 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

Fire hazard	: Combustible liquid.
Explosion hazard	: May form flammable/explosive vapor-air mixture.

#### 5.3. Advice for firefighters

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

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges.
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##### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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##### 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.

#### 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.
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#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed	: Handle empty containers with care because residual vapors are flammable. Keep away from ignition sources. - No smoking.
Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking.
Hygiene measures	: Wash hands thoroughly after handling.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
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Storage conditions	: Store in original container. Keep container closed when not in use. Keep in fireproof place.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses.
Respiratory protection	: Wear approved mask.
Other information	: When using, do not eat, drink or smoke.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Amber or light brown liquid.
Color	: Amber or light brown.
Odor	: Ammoniacal.
Odor threshold	: No data available
pH	: 6 - 6.7
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	: Does not flash
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	: 1.015 - 1.025
Solubility	: Completely miscible.
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

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Not established. Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Not established.

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### 10.4. Conditions to avoid

Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Glyphosate (1071-83-6)	
LD50 oral rat	4873 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 12.2 mg/l/4h (Rat)

Skin corrosion/irritation : Not classified

pH: 6 - 6.7

Serious eye damage/irritation : Causes serious eye damage.

pH: 6 - 6.7

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after eye contact : Causes serious eye damage.

## SECTION 12: Ecological information

### 12.1. Toxicity

Glyphosate (1071-83-6)	
LC50 fish 1	52 - 240 mg/l (96 h; Oncorhynchus mykiss; Soft water)
EC50 other aquatic organisms 1	3.32 mg/l (Algae)
LC50 fish 2	97 mg/l (96 h; Pimephales promelas)
TLM other aquatic organisms 1	281 mg/l (96 h; Palaemonetes sp.)
Threshold limit other aquatic organisms 1	50 mg/l (504 h; Daphnia magna)
Threshold limit algae 2	45 mg/l (72 h; Selenastrum capricornutum)

### 12.2. Persistence and degradability

Bonide Ground Force Vegetation Killer Concentrate	
Persistence and degradability	Not established.

  

Glyphosate (1071-83-6)	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. No inhibition of biodegradation process in the soil. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	< 0.0057 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.53 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.

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Glyphosate (1071-83-6)	
BCF fish 1	0.03 (336 h; Oncorhynchus mykiss)
BCF fish 2	0.63 (840 h; Lepomis macrochirus)
BCF other aquatic organisms 1	9.6 (840 h; Lamellibranchiata; GLP)
BCF other aquatic organisms 2	8 (672 h; Procambarus sp.)
Log Pow	-3.4 - -1.7
Bioaccumulative potential	Bioaccumulation: not applicable.

### 12.4. Mobility in soil

Glyphosate (1071-83-6)	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

### 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.  
Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT  
No dangerous good in sense of transport regulations

### Additional information

Other information : No supplementary information available.

## 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. Avoid contact with eyes or clothing. 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

No additional information available

### 15.2. International regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Flam. Liq. 4	Flammable liquids Category 4
H227	Combustible liquid
H318	Causes serious eye damage
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

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.*