



Bonide Chickweed Clover & Oxalis Killer Ready to Use

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 Chickweed Clover & Oxalis Killer Ready to Use
Product code : 2283364

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 (Oral) 4 H302
Eye Damage/Irritation 2B H320
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) : H302 - Harmful if swallowed
H320 - Causes eye irritation
H373 - May cause damage to organs (liver, kidneys) through prolonged or repeated exposure

Precautionary statements (GHS-US) : P260 - Do not breathe mist/spray
P264 - Wash hands and face thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - If swallowed, rinse mouth
P337+P313 - If eye irritation persists: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 - Get medical advice/attention if you feel unwell.
P501 - Dispose of contents/container to in accordance with local/national regulations

SECTION 3: Composition/information on ingredients

Mixture

Name	Product identifier	%
MCPA-dimethylammonium	(CAS No) 2039-46-5	0.74
Triethylamine Salt of 3,5,6-Trichloro-2-Pyridinyloxyacetic Acid	(CAS No) 57213-69-1	0.084
Dicamba, dimethylamine salt	(CAS No) 2300-66-5	0.072

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SECTION 4: First aid measures

4.1. Description of first aid measures

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| 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 symptoms develop, get medical 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. Immediately call a POISON CENTER or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse. |
| 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. Call a POISON CENTER/doctor/physician if you feel unwell. |

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

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|--------------------------------------|----------------------------------------------------------------------------------------------------|
| Symptoms/injuries after eye contact | : Causes moderate eye irritation |
| Symptoms/injuries after skin contact | : Repeated exposure to this material can result in absorption through skin causing a health hazard |
| Symptoms/injuries after ingestion | : Swallowing a small quantity of this material will result in serious health hazard. |

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

Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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| Suitable extinguishing media | : Recommended for large fires: foam or water spray. Recommended for small fires: 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

May produce gases such as hydrogen chloride and oxides of carbon and nitrogen. If water is used to fight fire or cool containers, dike to prevent runoff contamination of municipal sewers and waterways.

5.3. Advice for firefighters

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|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. Firefighters should wear NIOSH approved self-contained breathing apparatus and full fire-fighting turn out gear. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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| Emergency procedures | : Evacuate unnecessary personnel. |
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6.1.2. For emergency responders

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|----------------------|----------------------------------------------|
| 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

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| 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

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| 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. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. |

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Always store pesticides in a secured warehouse or storage building. Store at temperatures above 32° F. If allowed to freeze, remix before using. This does not alter this product. Containers should be opened in wellventilated areas. Keep container tightly sealed with not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed or other pesticides. Do not contaminate water, food or feed by storage or disposal..
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition.

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	: Slightly transparent
Odor	: Amine
Odor threshold	: No data available
pH	: 6.10 (1% w/w dispersion in DIW)
Melting point	: No data available
Freezing point	: 32 °F (0 °C)
Boiling point	: > 212 °F (> 100 °C)
Flash point	: Not applicable due to aqueous salt-based formulation
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	: 0.996 g/cc @ 25° C
Solubility	: Soluble
Viscosity	: 1.07 cPs @ 25° C; 0.852 cPs @ 42° C
Oxidizing properties	: No data available

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

Excessive heat. Do not store near heat or flame.

10.5. Incompatible materials

Strong acids. Strong bases.

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10.6. Hazardous decomposition products

Under fire conditions may produce gases such as hydrogen chloride and oxides of carbon and nitrogen..

SECTION 11: Toxicological information

Likely Routes of Exposure:

Eye Contact: Moderately irritating to the eye.

Skin Contact: Minimally irritating to the skin. Overexposure by skin absorption may cause symptoms similar to those for ingestion.

Ingestion: Harmful if swallowed. May cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness, muscle spasms.

Inhalation: Minimally irritating. May irritate the respiratory tract or cause dizziness.

Symptoms of Exposure:

Delayed, immediate and chronic effects of exposure: Prolonged exposure may cause liver and kidney damage.

Toxicological Data:

Data from laboratory studies conducted on a substantially similar product or this product if noted by (*):

Oral: Rat LD50: 1,207 mg/kg

Dermal: Rabbit LD50: >2,700 mg/kg

Inhalation: Rabbit: 4-hr LC50: >2.2 mg/L (no mortality at highest dose)

* Eye Irritation: Rabbit: Moderately irritating (all irritation cleared by day 7)

Skin Irritation: Rabbit: Slightly irritating

Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.

Subchronic (Target Organ) Effects: Repeated overexposure to phenoxy herbicides may cause effects to liver, kidneys, blood chemistry, and gross motor function. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed to substantiate these observations, even at high doses for prolonged periods. Excessive exposure to Triclopyr may cause liver or kidney effects. Repeated overexposure to dicamba may cause liver changes or a decrease in body weight.

Carcinogenicity / Chronic Health Effects:

The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, newer rat and mouse lifetime feeding studies did not show carcinogenic potential for MCPA. Triclopyr did not cause cancer in laboratory studies. Dicamba did not cause cancer in longterm animals studies. The U.S. EPA has given triclopyr and dicamba a Class D classification (not classifiable as to human carcinogenicity).

Reproductive Toxicity:

In laboratory animal studies, MCPA has caused effects on reproduction but only at doses that produced significant toxicity to the parent animals. MCPA studies in laboratory animals have shown testicular effects and lower male fertility. For triclopyr, in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Dicamba did not interfere with fertility in reproduction studies in laboratory animals.

Developmental Toxicity:

MCPA studies in laboratory animals have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. For triclopyr, birth defects are unlikely. Even exposures having an adverse effect on the mother should have no effect on the fetus. Animal tests with dicamba have not demonstrated developmental effects.

Genotoxicity:

There have been some positive and some negative studies, but the weight of evidence is that MCPA is not mutagenic. Animal tests with triclopyr and dicamba did not demonstrate mutagenic effects.

SECTION 12: Ecological information

12.1. Ecotoxicity

Data on MCPA DMA:

96-hour LC50 Bluegill: >310 mg/l

96-hour LC50 Rainbow Trout: 230 mg/l

48-hour EC50 Daphnia: 190 mg/l

Bobwhite Quail Oral LD50: 390 mg/kg

Mallard Duck 8-day Dietary LC50: >5,620 mg/kg

Data on Triclopyr TEA:

96-hour LC50 Bluegill: 893 mg/l

96-hour LC50 Rainbow Trout: 613 mg/l

48-hour EC50 Daphnia: 947 mg/l

Bobwhite Quail 8-day Dietary LC50: >10,000 mg/kg

Mallard Duck Oral LD50: 2,055 mg/kg

Mallard Duck 8-day Dietary LC50: >10,000 mg/kg

Data on Dicamba:

96-hour LC50 Bluegill: 135 mg/l

96-hour LC50 Rainbow Trout: 135 mg/l

48-hour EC50 Daphnia: 110 mg/l

Bobwhite Quail 8-day Dietary LC50: >10,000 mg/kg

Mallard Duck 8-day Dietary LC50: >10,000 mg/kg

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12.2. Environmental Fate

MCPA DMA rapidly dissociates to parent MCPA in the environment. In soil, MCPA is microbially degraded with a typical half-life of approximately 10 to 14 days. In laboratory and field studies, Triclopyr TEA rapidly dissociates to parent acid in the environment. Triclopyr is moderately persistent and mobile. In soil, the predominant degradation pathway is microbial and the average half-life is 30 days. Half-lives tend to be shorter in warm, moist soils with a high organic content. The predominant degradation pathway for triclopyr in water is photodegradation and the average half-life is one day. Dicamba poorly binds to soil particles, is potentially mobile in the soil and highly soluble in water. Aerobic soil metabolism is the main degradative process for dicamba with a typical half-life of 2 weeks. Degradation is slower when low soil moisture limits microbe populations. In water, microbial degradation is the main route of dicamba dissipation. Aquatic hydrolysis, volatilization, adsorption to sediments, and bioconcentration are not expected to be significant.

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.

13.2. Container Handling and Disposal

Nonrefillable Containers 5 Gallons or Less:

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

Nonrefillable containers larger than 5 gallons:

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

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: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing.

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.