



Bonide Chickweed, Clover & Oxalis 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 : Bonide Chickweed, Clover & Oxalis Killer Concentrate
Product code : 2283344

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 2A H319
Specific target organ toxicity - Repeated exposure 2 H373

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H302 - Harmful if swallowed
H319 - Causes serious 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 - Use personal protective equipment as required
P301+P317 - IF SWALLOWED: Get medical help.
P330 - Rinse mouth
P337+P317 - If eye irritation persists: Get medical help.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P319 - Get medical help 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 | % |
|--|---------------------|-------|
| DimethylammoniumSalt of 2-Methyl-4-Chlorophenoxyacetic Acid (Amine salt mixture of MCPA) | (CAS No) 2039-46-5 | 13.72 |
| Triethylamine Salt of 3,5,6-Trichloro-2-Pyridinyloxyacetic Acid (Triclopyr) | (CAS No) 57213-69-1 | 1.56 |
| Dimethylamine salt of Dicamba (3,6-Dichloro-o-Anisic Acid) (Dicamba) | (CAS No) 2300-66-5 | 1.35 |

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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 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.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Obtain immediate medical attention if pain, blinking or redness occurs.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. If symptoms develop, get medical attention.

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

- Symptoms/injuries : Causes moderate eye irritation. Harmful if swallowed.

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

- 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.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. If water is used to fight fire or cool containers, dike to prevent runoff contamination of municipal sewers and waterways. Exercise caution when fighting any chemical fire.
- Protection during firefighting : 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

- 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.

6.3. Methods and material for containment and cleaning up

- For containment : Dike spill using absorbant or impervious materials such as earth, sand, or clay. Collect and contain contaminated absorbant and dike material for disposal.
- 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

Do not get in eyes. Avoid contact with skin or clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/Personal Protective Equipment (PPE) immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

7.2. Conditions for safe storage, including any incompatibilities

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.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Engineering controls

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

8.3. Individual Protection Measures

| | |
|--------------------------------|---|
| Personal protective equipment | : Avoid all unnecessary exposure. |
| Skin protection | : To avoid contact with skin, wear long pants, long-sleeved shirt, shoes plus socks, and chemical-resistant gloves made of any waterproof material. For overhead exposure, wear chemical-resistant headgear. Washing facilities should be readily accessible to the work area. |
| Eye protection | : To avoid contact with the eyes, wear chemical goggles or safety glasses. An emergency eyewash or water supply should be readily accessible to the work area. |
| Respiratory protection | : Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.. |
| General Hygiene Considerations | : Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|------------------------------|--------------------------------------|
| Physical state | : Liquid |
| Color | : Light Yellow |
| Odor | : Amine odor |
| pH | : 4.74 (1% w/w dispersion in DIW) |
| Melting point/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 density | : 1.030 g/cc @ 25° C |
| Solubility | : Soluble |
| Viscosity | : 1.75 cPs @ 25° C; 1.24 cPs @ 43° C |

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 oxidizing agents: bases and acids.

10.6. Hazardous decomposition products

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

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SECTION 11: Toxicological information

11.1. Likely Routes of Exposure

Eye contact, Skin contact

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.

11.2 Symptoms of Exposure

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

11.3 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 (corneal involvement cleared in 8 – 21 days)

Skin Irritation: Rabbit: Slightly irritating

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

11.4 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

12.2. Persistence and degradability

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Persistence and degradability

Not established.

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12.3. Bioaccumulative potential

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| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

12.4. Mobility in soil (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 halflife 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.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste disposal method

Pesticide wastes are acutely hazardous. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use 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.

13.2. Residential

Nonrefillable container. Do not reuse or refill this container. If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor (including toilet) or outdoor (including sewer) drain.

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:

WARNING: Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through skin. Do not get in eyes, or on clothing. Avoid contact with skin. This product may cause skin sensitization reactions in some people. Wear long-sleeved shirt and long pants, socks and shoes, protective eyewear (goggles or face shield), and chemical-resistant gloves made of any waterproof material.

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.