



Bonide Duraturf Weed & Feed 16-0-08

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 Weed & Feed 16-0-08
Product code : 2284014

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

Use of the substance/mixture : Herbicide, Fertilizer

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

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)

Eye Damage/Irritation 2B H320
Hazardous to aquatic environment, acute 2 H401

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) : None
Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H320 - Causes eye irritation.
H401 - Toxic to aquatic life.
Precautionary statements (GHS-US) : P264 - Wash thoroughly after handling
P273 - Avoid release to the environment
P305 + P351 + P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P317 - If eye irritation persists: Get medical help.
P501 - Dispose of contents/container to in accordance with local/national regulations

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3. Mixture

Name	Product identifier	%
Isooctyl (2-ethylhexyl) Ester of 2,4-Dichlorophenoxyacetic Acid (part of 2,4-D mixture)	(CAS No) 1928-43-4	1.346
2,4-Dichlorophenoxyacetic Acid (part of 2,4-D mixture)	(CAS No) 94-75-7	0.182
Mecoprop-p: (+)-R-2-(2-Methyl-4-Chlorophenoxy) propionic Acid (MCP-p)	(CAS No) 16484-77-8	0.359
Dicamba (3,6-Dichloro-o-Anisic) Acid	(CAS No) 1918-00-9	0.090

Ingredients not precisely identified are proprietary or non-hazardous.

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. Get medical attention if symptoms develop.
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.

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- First-aid measures after eye contact : Rinse immediately with plenty of water. Hold eye open and rinse slowly and gently with water for several minutes. Remove contact lenses, if present, then continue rinsing eye. 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

Eye exposure causes moderate irritation.

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

None expected.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Under fire conditions, this product may produce oxides of carbon, hydrogen chloride, hydrogen fluoride, oxides of nitrogen, ammonia, oxides of phosphorus, oxides of sulfur and hydrogen sulfide.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.
- 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

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. See Personal Protection information in Section 8.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected soil area should be removed and placed in an appropriate container for disposal.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. Store away from other materials.

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

- 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Protect from moisture. Store in a cool, dry place. Keep container closed when not in use and away from food, feedstuffs, and domestic water supplies. Store in original container.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition.

SECTION 8: Exposure controls/personal protection

8.1. 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.

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8.2. Personal Protective Equipment:

Personal protective equipment	: Avoid all unnecessary exposure.
Skin Protection	: To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemicalresistant gloves. An emergency shower or water supply should be readily accessible to the work area.
Eye/Face Protection	: To avoid contact with eyes, wear face shield, goggles or safety glasses with front, brow and temple protection. An emergency eyewash or water supply should be readily accessible to the work area.
Respiratory Protection	: Not normally required. If vapors or dusts 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	: Solid
Appearance	: Multi-colored granules
Color	: Multi-colored
Odor	: Mild fertilizer and amine
pH	: 5.51 (1% w/w dispersion in DIW)
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: Not flammable based on product components
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative density	: 0.83 g/cc
Solubility	: Partially soluble
Viscosity	: Not applicable due to product form

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

This material is stable under normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization 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.

SECTION 11: Toxicological information

11.1. Likely Routes of Exposure

Eye contact, Skin contact

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11.2. Symptoms of Exposure:

Eye Contact: This product is minimally irritating.
Skin Contact: This product is no more than slightly toxic and no more than mildly irritating based on toxicity studies.
Ingestion: This product is no more than slightly toxic if ingested based on toxicity studies.
Inhalation: This product is no more than slightly toxic if inhaled based on toxicity studies.

11.3. Toxicological Data:

Data from laboratory studies on this product are summarized below:

Oral, Rat LD50: >5,000 mg/kg

Dermal, Rat or Rabbit LD50: >5,000 mg/kg

Inhalation, Rat 4-hr LC50: A suitable atmosphere cannot be generated due to physical characteristics of substance.

Eye Irritation, Rabbit: Mildly Irritating (MMTS=11.7 unrinsed, 5.3 rinsed)

Skin Irritation, Rabbit: Slightly irritating (PDII=0.2)

Skin Sensitization, Guinea Pig: Not a sensitizer

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.

Carcinogenicity / Chronic Health Effects:

Prolonged overexposure to phenoxy herbicides can cause liver, kidney and muscle damage. 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, more current 2,4-D lifetime feeding studies in rats and mice did not show carcinogenic potential. The U.S. EPA has given 2,4-D a Class D classification (not classifiable as to human carcinogenicity).

Reproductive Toxicity:

No impairment of reproductive function attributable to 2,4-D have been noted in laboratory animal studies.

Developmental Toxicity:

Studies in laboratory animals with 2,4-D have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. N-methyl-pyrrolidone has been shown in studies to cause developmental harm.

Germ Cell Mutagenicity:

There have been some positive and some negative studies, but the weight of evidence is that 2,4-D is not mutagenic.

SECTION 12: Ecological information

12.1. Ecotoxicity

Data on 2,4-D 2-EHE:

96-hour LC50 Bluegill: >5 mg/l

96-hour LC50 Rainbow Trout: 7.2 mg/l

48-hour EC50 Daphnia: >5 mg/l

Bobwhite Quail Dietary LC50: >5,620 ppm

Mallard Duck Dietary LC50: >5,620 ppm

Data on 2,4-D Acid:

96-hour LC50 Rainbow Trout: 100 mg/l

48-hour LC50 Daphnia: 1.4 mg/l

Mallard Duck LC50: >1,000 ppm

Mallard Duck 8-day Dietary LC50: >5,000 ppm

Data on Mecoprop-p:

96-hour LC50 Bluegill: >100 mg/l (literature)

48-hour EC50 Daphnia: >270 mg/l (literature)

72-hour EC50 Green Algae: >270 mg/l (literature)

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 ppm

Mallard Duck 8-day Dietary LC50: >10,000 ppm

12.2. Persistence and Degradability / Mobility in soil

In laboratory and field studies, 2,4-D 2-ethylhexyl ester rapidly de-esterified to parent acid in the environment. The typical half-life of the resultant 2,4-D acid ranged from a few days to a few weeks. Mecoprop-p DMA rapidly dissociates to parent mecoprop-p acid in the environment. Mecoprop-p is relatively immobile in most soils and has a half-life of several days in surface soils. 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.

12.3. Bioaccumulative potential

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Bioaccumulative potential

Not established.

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12.4. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste Disposal Method:

Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, contain all spillage. Clean up all spilled material. Place in a closed labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate ground water. 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. Container Handling and Disposal:

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

DOT

≤ 6545 pounds per completed package; Non-regulated

> 6544 pounds per completed package; UN 3077, Environmentally hazardous substance, solid, n.o.s., (2,4-D Ester), 9, III, RQ

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 skin, eyes, or clothing. Wear long pants, long sleeved shirt, socks and shoes when applying this product. After using this product, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water.

15.1. US Federal regulations

No additional information available

15.2. International regulations

No additional information available

15.3. US State regulations

Mecoprop (93-65-2)

U.S. - New Jersey - Right to Know Hazardous Substance List

2,4-dichlorophenoxyacetic acid (94-75-7)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

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.