



Bonide Revitalize Biofungicide 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 Revitalize Biofungicide Concentrate
Product code : 70051-107-4

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

Use of the substance/mixture : Fungicide

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)

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Precautionary Statements

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco and using the toilet.

2.4. Other Hazards

For Terrestrial Uses: Do not apply directly to water or to areas where surface water is present, or to intertidal areas below mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate. Do not apply when weather conditions favor drift or runoff from treated areas.

SECTION 3: Composition/information on ingredients

Mixture

Name	Product identifier	%	Classification (GHS-US)
Bacillus amyloliquefaciens strain D747	CAS#68038-60-8	98.85	Not classified

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. Have the product label with you when calling a poison control center or doctor.

First-aid measures after inhalation : Move person to fresh air. If person is not breathing call 911 or an ambulance then give artificial respiration preferable mouth to mouth if possible. Call poison control center or doctor for further advice.

First-aid measures after skin contact : Take off contaminated clothing and rinse with plenty water for 15-20 minutes. Call poison control center or doctor for treatment advice.

First-aid measures after eye contact : Hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lens after 5 minutes if present then continue rinsing eye. Seek medical attention if irritation persists.

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

May cause an allergic reaction in some individual

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

Note to Physicians: The active ingredient contained in this product has a high affinity for activated charcoal. In case of ingestion of large amounts, administrate 5 mg/kg activated charcoal suspension (50g/400mL water).

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : All extinguishing media
Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

None known

5.3. Advice for firefighters

Protection during firefighting : None Specified

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

: Use personal protection recommended in Section 8.

6.1.2. For emergency responders

: Use personal protection recommended in Section 8.

6.2. Environmental precautions

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local and national health and environmental regulations.

6.3. Methods and material for containment and cleaning up

Methods for Containment: Recover free product. Use absorbent material to minimize runoff of product or mixed product.
Methods for Cleaning-up: Sweep up and place in a chemical container. Seal the container and handle in an approved manner. Do not allow wash water to contaminate water supplies. Dispose of in accordance with Federal State and local regulations for disposal of non-hazardous waste.

6.4. Reference to other sections

See Section 8 for occupational exposure limits and risk management measures. Refer to Section 13 for disposal considerations..

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. - Remove clothing/PPE immediately if pesticides got 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

Storage conditions : Store pesticide in a cool dry area that is inaccessible to children. Store in original containers only. Keep container closed when not in use.

7.3. Specific end use(s)

Wastes resulting from the use of this product maybe be disposed of on site or at an approved waste disposal facility.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OSHA Permissible Exposure Limits (PELs): Not determined
ACGIH Threshold Limit Values: Not determined
Other Exposure Limits: Not determined

8.2. Exposure controls

Engineering Controls: Use in well ventilated area

Personal Protective Equipment

Eye/Face Protection: None specified

Skin Protection Long sleeved shirt and long pants

Hand Protection: Waterproof gloves

Body Protection: Shoes plus socks

Respiratory Protection: Mixer loaders and applicators must wear a dust/mist respirator meeting NIOSH standards of at least N-95, R- 95, or P-95.

Thermal Hazards: None

General Hygiene Considerations: Repeated exposure to high concentrates of microbial proteins can cause allergic sensitization. Wash clothing and PPE using manufacturer's instructions immediately after use and before reuse.

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Environmental exposure controls: Do not apply directly to water or to areas where surface water is present or intertidal areas below high water mark. Do not contaminate water when disposing of equipment wash water or rinsate. Do not apply when weather conditions favor drift or run off from treated areas.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	: Tan liquid
Odor	: Yeast like
Odor threshold	: Not determined
pH	: 4.5 - 5.0
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point / Freezing point	: 32°F (0°C)
Initial Boiling point	: 212°F (100 °C)
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 vapor density at 20 °C	: No data available
Density	: 8.5-8.6 lb./gallon
Solubility	: No data available
Viscosity	: 4.0-16 cP
Explosive properties	: None known
Oxidizing properties	: None known

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None known

10.4. Conditions to avoid

None known

10.5. Incompatible materials

None known

10.6. Hazardous decomposition products

None known

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:
LD ₅₀ (oral)	: LD ₅₀ > 5000 mg/kg body weight rat, test results based on similar product containing the same active ingredient.
LD ₅₀ (dermal)	: LD ₅₀ > 5050 mg/kg body weight rat, test results based on similar product containing the same active ingredient.
LD ₅₀ (inhalation)	: LC ₅₀ > 2.18 mg/L, test results based on similar product containing the same active ingredient.
Skin corrosion/ irritation	: Non-irritating, Toxicity Category IV
Eye irritation	: No positive effects exhibited in any eyes after treatment Practically non- irritating, Toxicity Category IV
Respiratory or skin sensitization	: No data available.
Carcinogenicity	: Not applicable.

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SECTION 12: Ecological information

12.1. Toxicity

Test Species	Test Method	Test substance	LC50
Northern Bobwhite	Acute oral toxicity	B. amyloliquefaciens strain D747, active ingredient	LD ₅₀ > 2250 mg/kg body weight
Oncorhynchus mykiss	30 days	B. amyloliquefaciens strain D747, active ingredient	LC ₅₀ > 8.1 x 10 ¹⁰ CFU/L
Daphnia magna	21 days	B. amyloliquefaciens strain D747, active ingredient	EC ₅₀ > 2.3 x 10 ¹⁰ CFU/L
Apis mellifera	48 hours	B. amyloliquefaciens strain D747, active ingredient	LC ₅₀ > 1.0 x 10 ⁹ CFU/mL

12.2. Persistence and degradability

The active substance B. amyloliquefaciens D747 populations spreading to the environment during or after field application will rapidly decline to naturally occurring background levels.

12.3. Bioaccumulative potential

The active substance B. amyloliquefaciens D747 does not multiply and accumulate in animals and humans.

12.4. Mobility in soil

The active substance B. amyloliquefaciens D747 spores readily adsorb to the clay fractions in soils and show no evidence of leaching. Therefore the risk of ground water contamination is considered negligible.

12.5. Other adverse effects

Other information : No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal Instructions : Do not contaminate water, food, or feed by storage and disposal.
Pesticide Storage : Store this product in its original container only, in an area inaccessible to children. Keep the container closed when not in use.
Pesticide Disposal : Wastes resulting from the use of this product may be disposed of onsite or at an approved waste disposal facility.
Container Handling: Non-refillable container. Do not reuse or refill this container.

-For containers equal to or less than 5 gallons

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 ¼ 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, if available or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

- For containers greater than 5 gallons

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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.

SECTION 14: Transport information

14.1. UN number : Not regulated.
14.2. UN proper shipping name : Not regulated.
14.3. Transport hazard class(es) : Not regulated.
14.4. Packing group : Not regulated.
14.5. Environmental hazards : Not regulated.
14.6. Special precautions for user : Not regulated.
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code : Not regulated.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EPA: This product is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticidal chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

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CAUTION, KEEP OUT OF REACH OF CHILDREN

Prolonged or frequently repeated skin contact may cause allergic reactions in some individual.

Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

OSHA: N/A

TSCA Status: Exempt

CERCLA Reportable Quantity: N/A

SARA Title III:

Section 302: N/A

Section 311/312: N/A

Section 313: N/A

RCRA Status: N/A

SECTION 16: Other information

Disclaimer:

To the best of our knowledge, the information contained herein is accurate. However, neither Certis USA nor any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All material may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

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.