

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : BotaniGard® Optima ES
Synonyms : N/A

1.2. Recommended use and restrictions on use

Recommended use : For Control of Whiteflies, Aphids, Thrips, Psyllids, Mealybugs, Leafhoppers, Weevils, Plant Bugs, Borers and Leaf-feeding Insects on Listed Food and Nonfood Crops Outdoors, in Indoor/Outdoor Nurseries, Greenhouses, Shadehouses, Commercial Landscapes, and Interiorscapes, and on Turf.
Restrictions on use : Read and understand the entire label before using. Use only according to label directions. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

1.3. Supplier

Certis USA LLC
9145 Guilford Road, Suite 175
Columbia, MD 21046

1.4. Emergency telephone number

Emergency number : In case of transport or medical emergencies, impacted party can call VelocityEHS at 1-800-255-3924.

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Aspiration hazard, Category 1 H304 May be fatal if swallowed and enters airways.
Full text of H-statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H304 - May be fatal if swallowed and enters airways.
Precautionary statements (GHS US) : P301+P310 - If swallowed: Immediately call a poison center or doctor.
P331 - Do NOT induce vomiting.
P405 - Store locked up.
P501 - Dispose of contents/container to a hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

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2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Carrier*	CAS-No.: Trade Secret	≥ 80
Beauveria bassiana strain GHA	CAS-No.: None Assigned	1 – 5

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Move the affected person to fresh air. Get medical attention if symptoms occur.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. Get medical advice if skin irritation persists.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Get medical attention if irritation develops and persists.
First-aid measures after ingestion	: Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Inhalation	: May cause minor irritation to the respiratory tract and to other mucous membranes.
Skin	: May cause slight irritation to the skin.
Eyes	: May cause minor eye irritation.
Ingestion	: Risk of lung oedema. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

If accidentally swallowed obtain immediate medical attention.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: None.

5.2. Specific hazards arising from the chemical

Fire hazard	: This product is not classified as flammable or combustible.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
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According to 29CFR 1910.1200 OSHA Hazard Communication Standard

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear suitable protective clothing. Avoid contact with eyes, skin and clothing. Remove clothing or PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with eyes, skin and clothing. Wash hands with water and soap. Ensure adequate ventilation. Remove clothing/Personal Protective Equipment (PPE) immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area. Store locked up.
Incompatible materials : None known.
Storage temperature : 40 – 85 °F

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

BotaniGard® Optima ES

No additional information available

Beauveria bassiana strain GHA (None Assigned)

No additional information available

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Carrier	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 mg/m ³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA)	5 mg/m ³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : No particular/specific measures required.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Wear suitable gloves
Eye protection:
Use suitable eye protection
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. In operations where exposure limits are exceeded or exposure levels are excessive, an approved respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Brown. Liquid.
Colour	: Brown
Odour	: petroleum-like odour
Odour threshold	: No data available
pH	: 6 – 7
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 0.85 – 0.9
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available

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Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

BotaniGard® Optima ES	
LD50 oral rat	> 5000
LD50 dermal rat	> 5050
LC50 Inhalation - Rat	> 2.01 mg/l
ATE US (oral)	5000 mg/kg bodyweight
ATE US (dermal)	5050 mg/kg bodyweight
ATE US (vapours)	2.01 mg/l/4h
ATE US (dust,mist)	2.01 mg/l/4h
Carrier	
LD50 oral rat	> 5000 mg/kg

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Carrier	
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 5 mg/l/4h No mortality

Skin corrosion/irritation	: Not classified pH: 6 – 7
Serious eye damage/irritation	: Not classified pH: 6 – 7
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Carrier	
NOAEL (oral, rat, 90 days)	≥ 1200 mg/kg bodyweight

Aspiration hazard	: May be fatal if swallowed and enters airways.
Viscosity, kinematic	: No data available

Carrier	
Viscosity, kinematic	> 3 mm ² /s
Hydrocarbon	Yes

Inhalation	: May cause minor irritation to the respiratory tract and to other mucous membranes.
Skin	: May cause slight irritation to the skin.
Eyes	: May cause minor eye irritation.
Ingestion	: Risk of lung oedema. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
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Carrier	
LC50 - Fish [1]	> 100 mg/l
EC50 - Crustacea [1]	> 100 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

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According to 29CFR 1910.1200 OSHA Hazard Communication Standard

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	: Dispose of in accordance with applicable federal, state, and local regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: To avoid wastes, use all material in this container by application to label directions. If wastes cannot be avoided, offer remaining product to waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry.). Container Disposal: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. When possible, triple rinse the container and offer for recycling if available.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Special precautions for user

DOT

Not regulated

TDG

Not regulated

IMDG

Not regulated

IATA

Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Beauveria bassiana strain GHA	CAS-No. None Assigned	1 – 5%
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This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

FIFRA Labelling

EPA Registration Number	82074-17
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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.

FIFRA Precautionary Statement	Keep out of reach of children.
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FIFRA Other	<p>This product is potentially pathogenic to honey bees. Avoid applying to areas where honey bees are actively foraging or around bee hives. This product may be toxic to fish. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.</p> <p>For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.</p>
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15.2. International regulations

CANADA

Carrier

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

According to 29CFR 1910.1200 OSHA Hazard Communication Standard

Full text of H-statements

H304	May be fatal if swallowed and enters airways.
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Safety Data Sheet (SDS), USA

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.