



## SAFETY DATA SHEET

1 of 11

### Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

### 1.1 Product Identifier

**MATERIAL NAME:** Zorda WG Biological Fungicide

**Synonyms:** Amyloshield Biological Fungicide, Magic Gardener Biological Disease-Control, VBC-80212, VBC-80173

**EPA Reg No.:** 73049-522

**Code Number:** N/A

**List Number:** 60700

**Chemical Family:** Microbial, BA-1 strain PTA-4838

**Substance Registration Number(s)[REACH]:** N/A

### 1.2 Relevant Identified Uses and Uses Advised Against

**Identified Uses:** Fungicide

**Uses Advised Against:** Use only according to EPA Label.

### 1.3 Details of the supplier of the Safety Data Sheet

**Supplied By:** Valent BioSciences LLC  
1910 Innovation Way, Suite 100  
Libertyville, Illinois 60048

### 1.4 EMERGENCY TELEPHONE NUMBERS

**Emergency Health or Spill:**

VBC Product Information: (800)323-9597

Health Emergency (24 hours): 1-877-315-9819

US Transportation (24 hr): CHEMTREC: 800-424-9300

International Transportation (24 hr): 703-741-5970

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance or Mixture

Acute Toxicity (Inhalation) – Category 4

Eye Irritation – Category 2B

Skin Sensitizer – Category 1

### 2.2 Labeling Elements

**Symbol(s)**

## Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

**Signal Word**

WARNING

**Hazard Statement(s)**

Toxic if inhaled.  
May be harmful if swallowed.  
May be harmful in contact with skin.  
Causes eye irritation.  
May cause an allergic reaction.

**Precautionary Statement:****Prevention**

Avoid breathing dust, mist or spray.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves.  
Wash hands and face thoroughly after handling.  
Do not eat, drink or smoke when using this product.

**Response**

IF INHALED: Remove person to fresh air and keep comfortable for breathing, call Poison Control Center/Doctor.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF ON SKIN: Wash with plenty of water.  
If skin irritation or rash occurs: Get medical advice/ attention.  
Take off contaminated clothing and wash it before reuse.

**Storage**

Store in a well-ventilated place. Keep container tightly closed.

**Disposal**

Dispose of contents/container in accordance with local/regional/national regulations.

**2.3 Other Hazards**

Could form combustible dust.

## Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

CAS #	Components	Percent
None	<i>Bacillus amyloliquifaciens</i> , strain PTA-4838 as dried Tech powder	74.81%
Trade secret	Other Ingredients	25.19%

**4. FIRST AID MEASURES****4.1 Description of First Aid Measures**

**GENERAL:** In all cases of doubt, seek medical attention.

**EYES:** Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

**SKIN:** Remove from source of exposure. Take off contaminated clothing. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

**INGESTION:** Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. If signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

**INHALATION:** Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. If person is not breathing, call 911, and then give artificial respiration.

**4.2 Most important Symptoms and Effects, both Acute and Delayed****Acute**

Not known

**Delayed**

Not known

**4.3 Indication of any Immediate Medical Attention and Special Treatment Needed**

Treat symptomatically and supportively

**5. FIRE FIGHTING PROCEDURES**

## Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

**5.1 Extinguisher Media****Suitable Extinguisher Media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable Extinguisher Media**

None known

**5.2 Specific Hazards Arising from the Chemical**

None known

**Thermal decomposition products**

Carbon oxides, nitrogen oxides

**5.3 Advice to Firefighters****Protective Equipment and precautions for firefighters**

Fire fighter should wear full-face, self-contained breathing apparatus and protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

**Fire & Explosive hazard**

Formulated product is not expected to be flammable. Aqueous formulation.

**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

Wear a dust mask. In addition to the personal protective equipment in section 8.

**6.2 Environmental Precautions**

Keep out of drains, sewers, ditches and waterways. Avoid runoff to waterways and sewers.

**6.3 Methods and Materials for Containment and Cleaning Up**

Recover product and place in an appropriate chemical waste container for disposal.

**6.4 Reference to Other Sections**

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

US Regulations may require reporting spills of hazardous materials: See Section 15: Regulatory Information for details on reportable quantities, if any.

**7. HANDLING AND STORAGE**

## Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

**7.1 Precautions for Safe handling**

Avoid breathing dust, mist or spray. Avoid contact with eyes, skin or clothing. Wash hands and face after handling. Do not eat drink or smoke while working with product, obey reasonable safety precautions and practice good housekeeping.

**7.2 Conditions for Safe Storage, Including and Incompatibilities**

Protect against physical damage. Store in a cool, dry well-ventilated location.

**Incompatibilities**

None Known

**7.3 Specific End Use(s)**

Foliar fungicide

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control Parameters****Component Exposure Limits**

None

**Derived No Effect Levels (DNELs)**

No DNELs available

**Predicted No Effect Concentrations (PNECs)**

No PNECs available

**8.2 Exposure Controls****Appropriate Engineering Controls**

Provide general ventilation. Where adequate general ventilation is unavailable use process enclosure, local exhaust ventilation, or other engineering control.

**SKIN PROTECTION:**

Wear protective clothing, including boots and gloves. For filling operations if dust/mist is produced respiratory protection is recommended. Wear gloves. Wash thoroughly with soap and water after handling.

**EYE PROTECTION:**

Wear goggles, safety glasses with side shields or full-face shield when splashing or spraying of materials is likely.

**RESPIRATORY PROTECTION:**

Use dust/mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C) or a NIOSH approved respirator with any N, P, R or HE filter). Wash thoroughly with soap and water after handling.

**Zorda WG Biological Fungicide**

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	Tan to Brown solid granular powder	Odor:	Not Determined
pH:	4.88 (1%)	Odor Threshold:	Not Determined
Melting Point:	Not Determined	Boiling Point:	Not Determined
Specific Gravity:	Not Determined	Solubility (H <sub>2</sub> O):	Not Determined
Relative Density:	Not Determined	Evaporation Rate:	Not Determined
Octanol/H <sub>2</sub> O Coeff:	Not Determined	Decomposition Temp.:	Not Determined
Auto Ignition:	Not Determined	LFL:	Not Determined
Flash Point:	Not Determined	UFL:	Not Determined
Vapor Density:	Not Determined	Vapor Pressure:	Not Determined
VOC:	Not Determined	Flammability Class:	Not highly flammable
Kinematic Viscosity:	Not Determined		

**10. CHEMICAL STABILITY AND REACTIVITY**

**10.1 Reactivity**

Expected to be stable under ordinary conditions of use and storage.

**10.2 Chemical Stability**

Expected to be stable under ordinary conditions of use and storage.

**10.3 Possibility of Hazardous Reactions**

Not expected to undergo hazardous polymerization.

**10.4 Conditions to Avoid**

None known

**10.5 Incompatible Materials**

None known

**10.6 Hazardous Decomposition Products**

Material is not expected to decompose at ambient temperatures.

**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on Toxicological Effects**

LIKELY ROUTES OF EXPOSURE:

Eye Contact: Yes  
 Skin Contact: Yes  
 Inhalation: Yes

## Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

Ingestion: Unlikely

Product (and or TGAI) ToxicologyAcute Effects

## ACUTE EFFECTS Product Toxicology Studies

ORAL TOXICITY: LD<sub>50</sub> >5,000 mg/kgDERMAL TOXICITY: LD<sub>50</sub>: 5,000 mg/kgINHALATION TOXICITY: LC<sub>50</sub>: Under the study, the single exposure acute inhalation LC<sub>50</sub> of Zorda WG is between 2.21 mg/L and 0.59 mg/L in male rats and greater than 5.31 mg/L in female rats.

CORROSIVENESS: Not Corrosive

DERMAL IRRITATION: Slightly irritating

OCCULAR IRRITATION: Mildly irritating

DERMAL SENSITIZER: This product is a dermal sensitizer

**12. ECOLOGICAL INFORMATION****12.1 Ecotoxicity**

Do not allow into waterways or lakes.

Fish: LD<sub>50</sub>: >1.0 x 10<sup>6</sup> CFU/ml Rainbow Trout 42 days, semi static conditionsNOEC: 1x10<sup>6</sup>CFU/mlBird: Acute oral bird toxicity: LD<sub>50</sub> and 30 day NOEL for technical material is 2.5 ml a.i./kg body weight.Invertebrates: LD<sub>50</sub>: 1.0 x 10<sup>5</sup> Chronic Daphnia magna test 21 static renewal test.Honey Bee: Acute toxicity test with bees: Non-toxic to honey bees when administered at 1 x10<sup>11</sup> CFU/ml.Beneficial Insect: Acute Oral Toxicity test with Parasitic Wasp, determined to be non-toxic 1.0 x 10<sup>11</sup> CFU/ml/sq. ft.

Shrimp: Chronic Shrimp toxicity and pathogenicity test:

Grass Shrimp 30 day static renewal test: EC<sub>50</sub> for survival, weight and length: >10<sup>6</sup> CFU/g. not chronically toxic or pathogenic to shrimp.

Earthworm reproduction study: 56 day test soil test: NOEC: ≥1000 mg/kg dry soil weight with no significant differences in mortality, weight and reproduction compared with the control.



## SAFETY DATA SHEET

8 of 11

Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

### 12.2 Persistence and Degradability

Environmental persistence and fate not evaluated.

### 12.3 Bioaccumulation potential

No data available

### 12.4 Mobility in Soil

No data available

### 12.5 Results of PBT and vPvB assessment

Assessments not performed

### 12.6 Other adverse effects

None known

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste Disposal Methods

Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.

US EPA WASTE NUMBER & DESCRIPTIONS:

There is no applicable EPA waste number. This product, if discarded, is not expected to be a characteristic or listed hazardous waste.

## 14. TRANSPORTATION INFORMATION

DOT STATUS: Not Regulated

UN PROPER SHIPPING NAME: N/A

REMARKS: N/A

IATA/ICA0 STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

REMARKS: N/A

IMDG STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

REMARKS: N/A

## 15. REGULATORY INFORMATION





## SAFETY DATA SHEET

9 of 11

Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

### 15.1 Safety, Health and Environmental Regulations / Specific Legislation

TSCA STATUS: Not Listed

CERCLA STATUS: Not regulated as hazardous

SARA STATUS: Acute: No Chronic: No Fire: No CDT: No

RCRA STATUS: Not regulated as hazardous

#### State Right-To-Know:

##### Massachusetts Right To Know Components

Sodium sulfate CAS-No.: 7757-82-6  
Silica, amorphous, precipitated and gel CAS-No.: 112926-00-8

##### Pennsylvania Right To Know Components

Sodium sulfate CAS-No.: 7757-82-6  
Silica, amorphous, precipitated and gel CAS-No.: 112926-00-8

##### New Jersey Right To Know Components

Sodium sulfate CAS-No.: 7757-82-6  
Silica, amorphous, precipitated and gel CAS-No.: 112926-00-8

##### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

OSHA HAZARD COMMUNICATION STANDARD: Not defined by the OSHA Hazard Communication Standard, 29 CFR.

### 15.2 FIFRA – Pesticide Labeling

EPA Registration Number: 73049-522

EPA Pesticide Label Signal Word: CAUTION

Product must have an EPA Approved Pesticide Label attached to or accompanying all containers.

This chemical 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 label of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions and limitations for its use.

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS



## SAFETY DATA SHEET

10 of 11

### Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

### CAUTION

Causes moderate eye irritation. Harmful if inhaled. Avoid contact with eyes or clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Keep container tightly closed when not in use. This product consists of living microbes. Place container in a cool, dry place. but do not exceed 95°F (35°C). Do not freeze.

Tightly close opened package.

#### Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Keep container tightly closed when not in use. This product consists of living microbes. Place container in a cool, dry place. but do not exceed 95°F (35°C). Do not freeze.

Tightly close opened package.

#### Pesticide Disposal:

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

#### Container Handling:

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration.

### 16. OTHER INFORMATION

#### NFPA Hazard Ratings

Health: N/D  
Flammability: N/D  
Instability: N/D

#### HMIS Hazard Ratings

Health: N/D  
Flammability: N/D  
Instability: N/D

0 = minimal  
1 = slight  
2 = moderate  
3 = serious  
4 = Extreme

REASON FOR ISSUE: General updates  
APPROVAL DATE: 11/29/2023



## SAFETY DATA SHEET

11 of 11

### Zorda WG Biological Fungicide

SDS# VBC-0505 Revision 8

ISSUED 11/29/2023

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

SUPERSEDES DATE: 03/09/2022

LEGEND: N/A = Not Applicable  
N/L = Not Listed  
C = Ceiling  
(R) = Registered Trademark of Valent BioSciences LLC  
(TM) = Registered Trademark of Valent BioSciences LLC  
N/D = Not Determined  
L = Listed  
S = Short-term

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, Valent BioSciences LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, neither Valent BioSciences LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. It is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences LLC to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) may provide more information than the product label but does not replace or modify the product labeling (attached to and accompanying the product container). The product SDS and the product label both provide consistent and important health, safety, and environmental information as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). This requirement covers employers, employees, emergency responders, users and others handling the product. All necessary hazard classification and appropriate precautionary, use, storage, and disposal information is set forth on the labeling and the SDS.



1910 Innovation Way, Suite 100  
Libertyville, IL 60048  
1-800-323-9597

© Valent BioSciences LLC, 2023