

Safety Data Sheet

Issue Date: 20-July-2020

Revision Date: 20-July-2020

Version 1

1. IDENTIFICATION

Product identifier

Product Name PRIMO R1

Other means of identification

SDS # VLS-070-ABN

Document

Recommended use of the chemical and restrictions on use

Recommended Use Seed Treatment.

Details of the supplier of the safety data sheet

Supplier Address

Verdesian Life Sciences, U.S., LLC.
1001 Winstead Drive, Suite 480
Cary, NC 27513

Emergency telephone number

Company Phone Number Business Phone: (800) 868-6446
Fax: (919) 535-3652
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Yellow to brown liquid **Physical state** Liquid **Odor** Mild

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Liquid inoculant products containing live culture of nitrogen fixing rhizobium bacteria.
The product may also contain a separate water-based additive of Azospirillum.

4. FIRST AID MEASURES

Description of first aid measures

General Advice Provide this SDS to medical personnel for treatment.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin Contact Wash off immediately with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse.

Inhalation	Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician/poison center if individual's condition declines or if symptoms persist.
Ingestion	Do NOT induce vomiting. Rinse mouth. Get medical attention if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms	May cause skin and eye irritation.
-----------------	------------------------------------

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
---------------------------	------------------------

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Product is not flammable.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Use personal protective equipment as required.
-----------------------------	--

Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
----------------------------------	---

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
--------------------------------	---

Methods for Clean-Up	Keep in suitable, closed containers for disposal.
-----------------------------	---

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Wash thoroughly after handling. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing.
--------------------------------	--

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
---------------------------	--

Incompatible Materials	Some seed-applied chemicals, including fungicides, may be harmful to the bacteria in this product. See product label for further information on the use of fungicides or other chemicals in conjunction with seed treatment.
-------------------------------	--

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines No exposure limits noted for ingredient(s). The following information is given as general guidance

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear eye/face protection.

Skin and Body Protection Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Mild
Appearance	Yellow to brown liquid	Odor Threshold	Not determined
Color	Yellow to brown		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	6.5-7.5	
Melting point / freezing point	Not determined	
Boiling point / boiling range	Not determined	
Flash point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Flammability Limit in Air	Not determined	
Upper flammability or explosive limits	Not determined	
Lower flammability or explosive limits	Not determined	
Vapor Pressure		
Vapor Density	Not determined	
Relative Density	Not determined	
Water Solubility	1.02 g/ml	
Solubility in other solvents	Insoluble in water	
Partition Coefficient	Not determined	
Autoignition temperature	Not determined	
Decomposition temperature	Not determined	
Kinematic viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Incompatible Materials.

Incompatible materials

Some seed-applied chemicals, including fungicides, may be harmful to the bacteria in this product. See product label for further information on the use of fungicides or other chemicals in conjunction with seed treatment.

Hazardous decomposition products

Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Direct contact with eyes may cause temporary irritation.
Skin Contact	May cause temporary irritation on skin contact.
Inhalation	Not an expected route of exposure.
Ingestion	May cause discomfort if swallowed.

Component Information

Not available

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	Not a skin sensitizer.
Carcinogenicity	Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

Oral LD50	28,826.00 mg/kg
Dermal LD50	242,073.00 mg/kg
Oral LD50	> 5000 mg/kg
Dermal LD50	> 2000 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product contains nonpathogenic, biodegradable Rhizobacterial strain(s) that occur(s) naturally in soil.

Persistence/Degradability

Not determined.

Bioaccumulation

There is no data for this product.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Not regulated

IATA

Not regulated

IMDG

Not regulated

15. REGULATORY INFORMATION

International Inventories

Not determined

US Federal Regulations

SARA 313

Not determined

US State Regulations

U.S. State Right-to-Know Regulations

Not determined

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards Not determined	Flammability Not determined	Instability Not determined	Special Hazards Not determined
<u>HMIS</u>	Health Hazards 0	Flammability 0	Physical hazards 0	Personal Protection Not determined

Issue Date: 20-July-2020
 Revision Date: 20-July-2020
 Revision Note: New product

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet