

Safety Data Sheet

Issue Date: 20-Jun-2015

Revision Date: 18-Oct-2016

Version 1

1. IDENTIFICATION

Product Identifier

Product Name PRIMO

Other means of identification

SDS # VLS-122-CA

Document PRIMO POWER, N-Take, and Accolade-L

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Fertiliser

Uses Advised Against No information available

Details of the supplier of the safety data sheet

Initial Supplier Identifier

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

Emergency Telephone Number

Initial supplier phone number Business Phone: (800) 868-6446 Fax: (919) 535-3652

2. HAZARDS IDENTIFICATION

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

Classification

This chemical does not meet the hazardous criteria set forth by the 2015 WHMIS standards. 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.

Label Elements

Signal word

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Liquid inoculant products containing live culture of nitrogen fixing rhizobium bacteria. Product may also contain a separate aqueous additive of Azospirillum bacteria as a growth promoter. Contains naturally occurring Rhizobacterium and growth enhancement compounds. These are symbiotic nitrogen-fixing bacteria, to be applied as a seed treatment or in-furrow at seed planting, to specific legume crops (not a plant food product). See product label for specific crop information, application rates and methods. Not for food, feed or drug use.

4. FIRST AID MEASURES

First Aid Measures

General advice	Provide this SDS to medical personnel for treatment.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash off immediately with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
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	Rinse mouth. Do NOT induce vomiting. Get medical attention if you feel unwell.

Most important symptoms and effects

Symptoms	May cause light sensitivity which appears as a skin rash when exposed to sunlight.
-----------------	--

Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
------------------------	------------------------

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	CAUTION: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	Product is not flammable.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation.
-----------------------------	------------------------------

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 cleaning up	Pick up and transfer to properly labelled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

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

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Protective gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection If necessary, wear a MSHA/NIOSH-approved respirator.

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
Appearance	Yellow to brown liquid
Colour	Yellow to brown
Odour	Mild
Odour Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	6.5-7.4	
Melting point / freezing point	-4 °C / 25 °F	
Boiling Point / Boiling Range	102 °C / 216 °F	
Flash Point	No data available	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Flammability Limit in Air		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Upper Flammability Limit	Not determined	
Lower Flammability Limit	Not determined	
Vapour Pressure	Not determined	
Vapour Density	Not determined	
Relative Density	1.0 g/cc	
Water Solubility	Insoluble in water	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive properties	No information available.	
Oxidising properties	No information available.	
<u>Other Information</u>		
Softening Point	No information available	
Molecular weight	No information available	
VOC Content (%)	No information available	
Density	No information available	
Bulk Density	No information available	

10. STABILITY AND REACTIVITY

Reactivity	Contact with acids liberates toxic gas.
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous Polymerisation	Hazardous polymerisation does not occur.
Conditions to Avoid	None known based on information supplied.
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	Bonds skin and eyes in seconds.
Inhalation	Not an expected route of exposure.
Ingestion	May cause discomfort if swallowed.

Information on physical, chemical and toxicological effects

Symptoms	Please see section 4 of this SDS for symptoms.
-----------------	--

Numerical measures of toxicity

Product Information

Acute Toxicity**Unknown acute toxicity** No information available**Oral LD50** > 5000 mg/kg**Dermal LD50** > 2000 mg/kg**Component Information** Mixture**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Carcinogenicity** Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.**12. ECOLOGICAL INFORMATION****Ecotoxicity** This product contains nonpathogenic, biodegradable Rhizobacterial strain(s) that occur(s) naturally in soil.**Persistence/Degradability** No information available.**Bioaccumulation** No information available.**Other Adverse Effects** No information available.**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods****Waste from residues/unused products** 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****DOT** Not regulated**TDG** Not regulated**IATA** Not regulated**IMDG** Not regulated**15. REGULATORY INFORMATION****REGULATORY INFORMATION****International Regulations****Ozone-depleting substances (ODS)** Not applicable**Persistent Organic Pollutants** Not applicable**Export Notification requirements** Not applicable

International Inventories

Not determined

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value
*	Skin designation
Issue Date:	20-Jun-2015

Revision Date: 18-Oct-2016

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