Safety Data Sheet

Issue Date: 11-Jan-2018 Revision Date: 11-Jan-2018 Version 1

1. IDENTIFICATION

Product Identifier

Product Name PRIMO Ultra and PRIMO Ultra Flexconnect

Other means of identification

SDS # VLS-243-2

Product Code FFN: not assigned

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 (24 hr) 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

Chemical Name	CAS No.	Weight-%
Proprietary Formulation Base	Proprietary	30-40

^{**}If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret**

4. FIRST AID MEASURES

First Aid Measures

General Advice In case of accident or unwellness, seek medical advice immediately (show directions for

use or safety data sheet if possible).

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes.

Inhalation Remove to fresh air.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects

Symptoms May be harmful if swallowed.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing agent suitable for type of surrounding fire. Dry Chemical, Carbon Dioxide, Foam, or Water Fog.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

None known.

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 Wear appropriate protective gear for the situation. See personal protection information in

Section 8.

Environmental precautions

Environmental precautionsSee Section 12 for additional Ecological Information. Prevent material from entering public

sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and

placed in an appropriate container for disposal.

Methods and material for containment and cleaning up

Methods for Containment Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and

contain contaminated absorbent and dike material for disposal.

Methods for Clean-Up Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

Collect spillage. Store away from other materials.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage ConditionsDo not contaminate water, food or feed by storage, disposal or by cleaning equipment.

Incompatible Materials

Some seed-applied chemicals, including fungicides, insecticides, and nematicides, may be harmful to the bacteria in this product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Proprietary Formulation Base	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust	TWA: 10 mg/m ³ total dust
	_	TWA: 5 mg/m³ respirable fraction	TWA: 5 mg/m ³ respirable dust
		(vacated) TWA: 15 mg/m ³ total	
		dust	
		(vacated) TWA: 5 mg/m ³	
		respirable fraction	

Appropriate engineering controls

Engineering Controls Where engineering controls are indicated by specific use conditions or a potential for

excessive exposure, use local exhaust ventilation at the point of generation.

Individual protection measures, such as personal protective equipment

Eye/Face ProtectionTo avoid contact with eyes, wear chemical goggles or shielded safety glasses. An

emergency eyewash or water supply should be readily accessible to the work area.

Skin and Body Protection Wear suitable protective clothing. An emergency shower or water supply should be readily

accessible to the work area.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations Personal hygiene is an important work practice exposure control measure and the following

general measures should be taken when working with or handling this material:

(1) Do not use, and /or consume foods, beverages, tobacco products, or cosmetics in area

where this material is stored.

(2) Wash hands and face carefully before eating, drinking, using tobacco, applying

cosmetics, or using the toilet.

(3) Wash exposed skin promptly to remove accidental splashes or contact with this

material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

Appearance Yellow to brown liquid Odor Mild

Color Yellow to brown Odor Threshold No data available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

pH 6.5-7.5

Melting Point/Freezing Point
Boiling Point/Boiling Range
Flash Point
Evaporation Rate
Flammability (Solid, Gas)
No data available
Not determined
No data available
Liquid-Not applicable

Flammability Limits in Air

Upper Flammability Limits
Lower Flammability Limit
No data available

Relative Density 1.09

Water Solubility Miscible in water

Solubility in other solvents Not determined **Partition Coefficient** No data available **Auto-ignition Temperature** No data available **Decomposition Temperature** No data available **Kinematic Viscosity** No data available **Dynamic Viscosity** No data available **Explosive Properties** Not determined **Oxidizing Properties** Not determined

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

This material is stable under normal handling and storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid

Incompatible Materials.

Incompatible Materials

Some seed-applied chemicals, including fungicides, insecticides, and nematicides, may be harmful to the bacteria in this product.

Hazardous Decomposition Products

Under fire conditions, may produce gases such as oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation Do not inhale.

Ingestion May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50	
Water 7732-18-5	> 90 mL/kg(Rat)	-	-	
Proprietary Formulation Base	= 29700 mg/kg (Rat)	-	-	
Sorbitol 50-70-4	= 15900 mg/kg(Rat)	-	-	
Proprietary mixture of organic and	> 1 g/kg (Rat)	-	-	

Information on physical, chemical and toxicological effects

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

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

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 36,774.00 mg/kg mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of WastesDisposal 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

<u>IMDG</u> Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Proprietary Formulation Base	Х	Х	Х		Х	Present	Х	Х

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Not determined

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Proprietary Formulation Base		X	X

16. OTHER INFORMATION

NFPAHealth HazardsFlammabilityInstabilitySpecial Hazards000Not determinedHMISHealth HazardsFlammabilityPhysical hazardsPersonal Protection00Not determined

Issue Date:11-Jan-2018Revision Date:11-Jan-2018Revision Note:New format

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