

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: *AquaVantage* EFFECTIVE DATE: January 1, 2018
 CHEMICAL FAMILY: Starch grafted - 2- Propenoic Acid- 2 Propenamide Copolymer
 CHEMICAL NAME: Starch grafted - 2- Propenoic Acid Potassium Salt - 2 Propenamide Copolymer Crosslinked
 COMPANY IDENTIFICATION:
 Sunn Global Biologics LLC
 PO Box 74 NON-EMERGENCY TELEPHONE:
 Robesonia, PA 19551 1+717-298-0856
 EMERGENCY TELEPHONE: 24 hours a day, 7 days a week
 CHEMTREC 1-800-424-9300

SECTION 2 – HAZARDS IDENTIFICATION

Emergency Overview

These products are white to light yellow, granular, odorless polymers that yield a gel-like material with the addition of water. They are insoluble in water and cause extremely slippery conditions when wet. Recent scientific information has determined that respirable particles of these materials are defined as inert or nuisance dusts by OSHA, under 29 CFR 1900.1000, Table Z-3. Although these products are not regulated as hazardous materials, any nuisance dust may be a potential respiratory tract irritant. Use an approved respirator if necessary when conditions merit. See Section 8 for Exposure Controls and Personal Protection.

Potential Health Effects: Eyes

Dust may cause burning, drying, itching, and other discomfort, resulting in reddening of the eyes.

Potential Health Effects: Skin

Exposure to the dust, such as in manufacturing, may aggravate existing skin conditions due to drying effect.

Potential Health Effects: Ingestion

As in any instance of non-food consumption, seek medical attention in the event of any adverse symptoms.

Potential Health Effects: Inhalation

Exposure to respirable dust may cause respiratory tract and lung irritation and may aggravate existing respiratory conditions. If necessary, use a the appropriate NIOSH approved dust mask.

HMIS Ratings: Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic Hazard

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

CAS #	Component	Percent
119131-19-0	Starch -g- 2-Propenoic acid, potassium salt, polymer with 2-propenamide	> 90

Component Information / Information on Non-Hazardous Components

The components of this product are not regulated as hazardous under 29 CFR and 49 CFR. All components are listed in TSCA 40 CFR 700.

SECTION 4 – FIRST AID MEASURES

First Aid: Eyes

Immediately flush with plenty of water. Remove particles remaining under the eyelids. Get medical attention if irritation persists.

First Aid: Skin

Remove polymer absorbent dust from skin using soap and water.

First Aid: Ingestion

Non-toxic by ingestion. However, if adverse symptoms appear, seek medical attention.

First Aid: Inhalation

If inhaled, move to source of fresh air. Seek medical attention if symptoms persist.

SECTION 5 – FIRE-FIGHTING MEASURES

General Fire Hazards

Dusts may form an explosive mixture with air.

Fire and Explosive Properties

Flammability Classification:	None	
Flash Point	NA	Flash Point Method
Flammable Limits - Upper	NE	
Lower	NE	

Hazardous Combustion Products

On thermal decomposition, oxides of carbon and nitrogen.

Extinguishing Media

Dry chemical, foam, carbon dioxide, and water fog. Extremely slippery conditions are created if spilled product comes in contact with water.

Fire Fighting Instructions

Firefighters should wear full protective clothing including self-contained breathing apparatus.

NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic Hazard

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Containment Procedures

Keep traffic in the area of the spill to a minimum. Use caution after contact of product with water, as extremely slippery conditions will result. This is a non-hazardous waste suitable for disposal in an approved solid waste landfill.

Clean up procedures

Sweep or vacuum material when possible and shovel into a waste container. Residuals may be flushed with water into the drain for normal wastewater treatment.

Evacuation Procedures

None required.

Special Procedures

Avoid respirable dust inhalation during clean up. Wear appropriate respirator.

SECTION 7 – HANDLING AND STORAGE

Handling

Handle as an eye and respiratory tract irritant.

Storage

Store in a dry, closed container.

SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Guidelines

A: General Product Information

These products are not regulated as hazardous. They are insoluble in water and cause extremely slippery conditions when wet. Recent scientific information has determined that respirable particles of these materials are defined as inert or nuisance dusts by OSHA, under 29 CFR 1900.1000, Table Z-3. Although these products are not regulated as a hazardous material, any nuisance dust may be a potential respiratory tract irritant. Use an approved respirator if necessary when conditions merit.

B: Component Exposure Limits

No information available.

C: Engineering Controls

Provide local exhaust ventilation to maintain worker exposure to less than 5 mg/m³ over an eight-hour period.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipments: Eyes/Face

Wear safety glasses with side shields or goggles.

Personal Protective Equipments: Skin

Use impervious gloves when handling the product in the manufacturing environment.

Personal Protective Equipments: Respiratory

Use a NIOSH approved HEPA filter, or supplied air respirators when exposures reach the OSHA established PEL's.

Personal Protective Equipments: General

Obey reasonable safety precautions and practice good housekeeping. Wash thoroughly after handling.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	White Granular Powder, no odor
pH	~ 7 (1% in water)
Specific Gravity (Bulk Density)	0.6 – 0.7 g/cm ³
Vapor Pressure	< 15 mm Hg @ 20°C (68 °F)
Vapor Density	NE
Melting Point	> 390 °F
Freezing Point	NA
Boiling Point	NA
Solubility in Water	Insoluble
Evaporation Rate (%)	< 1.0

SECTION 10– STABILITY AND REACTIVITY

Chemical Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

Chemical Stability: Conditions to Avoid

None

Incompatibility

None

Hazardous Decomposition Products

See combustion products.

Hazardous Polymerization

Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity

General Product Information:

Acute oral toxicity:	LD ₅₀ rat Dose: > 5000 mg/kg (3% solution) Method: OECD No. 401 Limit Test
Acute dermal toxicity:	LD ₅₀ rat Dose: > 2000 mg/kg Method: OECD No. 402 Limit Test
Skin irritation:	Rabbit Method: OECD Nr. 404 No irritation
Eye irritation:	Rabbit Method: OECD Nr. 405 No irritation
Sensitization:	Guinea pig Method: OECD Nr. 406 No sensitization

Acute inhalation of respirable dust may cause irritation of the upper respiratory tract and lungs.

Carcinogenicity:

A: General Product Information

This product is not listed as a carcinogen by IARC, NTP, or OSHA.

B: Component Carcinogenicity

No information is available.

Mutagenicity

This starch absorbent polymer had no effect in mutagenicity tests.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity

A: General Product Information

Biodegradability: Result – Not rapidly degradable under aerobic conditions.

Ciliate toxicity: *Tetrahymena pyriformis*: EC₅₀ > 6000 mg/l. 24 hr exposure.

Bacterial toxicity: *Ps. Putida*: EC₅₀ > 8000 mg/l. 24 hr exposure.

Fish toxicity: *Leuciscus idus*: LC₅₀ ~ 3600 mg/l. 96 hr exposure, OECD No. 203

Brachydanio rerio: LC₅₀ ~ 5000 mg/l. 96 hr exposure, OECD No. 203

Other information: Data report in Section 11 and 12 were determined on a comparable product.

B: Component Analysis – Ecotoxicity – Aquatic Toxicity

No information available.

SECTION 13 – DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions

A: General Product Information

These products are non-hazardous waste materials suitable for approved solid waste landfills.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for these products' components.

C: Disposal Instructions

Dispose of in accordance with Local, State, and Federal Regulations.

SECTION 14 – TRANSPORTATION INFORMATION

International Transportation Regulations

This product is not transport regulated.

SECTION 15 – REGULATORY INFORMATION

US Federal Regulations

A: General Product Information

This product is not federally regulated as a hazardous material. All components are listed on the TSCA inventory 40 CFR 700.

B: Clean Air Act

No information is available.

C: Component Analysis

No information available.

MSDS: AquaVantage®

SECTION 15 –REGULATORY INFORMATION, continued

State Regulations Component Analysis – State

This starch absorbent polymer is fully polymerized with no detectable residual monomers.

Component Analysis – WHMIS IDL

No components are listed in the WHMIS IDL.

Component Analysis – Inventory

Component	CAS #	TSCA	CAN	EEC
Starch 2 propenoic acid, potassium salt, polymer with 2-propenamide	119131-19-0	NO	DSL	Not regulated as a polymer.

SECTION 16 – OTHER INFORMATION

Revision Information:

Revision Date: 07 April 2015

Supersedes Revision Dated: 15 July 2013

Reason for Revision: Review and update all sections

Key: N/A – Not Applicable NE – Not Established

IMPORTANT: The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the time of publishing. The information given is designed only as a guidance for safe handling, use processing, storage, transportation, disposal and release and is not 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.