SHANDONG LUJIAN BIOLOGICA L TECHNOLOGY CO., LTD.

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MATERIAL SAFETY DATA SHEET

Material Name: Crystal Xylitol FCCV Product Code#:

MSDS#: LJ-1507

Revision Date: 11/09/15

* * * Section 1 – Chemical Product and Company Identification * * *

Chemical Name: Aqueous hydrogenated starch hydrolyzate solution

Product Use: Various uses

Manufacturer Information

Shandong Lujian Biological Technology Co., Ltd.

Yucheng high-tech development zone, Shandong, China

Phone Numbers:

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* * * Section 2- Composition / Information on Ingredients * * *

CAS#	Component	Percent
87-99-0	Assay (on dry basis)	≥98.5%
7732-18-5	Water	≤0.2%

Component Information/Information on Non-Hazardous Components

This product is considered non-hazardous by the criteria specified in 29 CFR 1910.12.00.(Hazard Communication).

* * * Section 3- Hazards Identification * * *

Emergency Overview

Product is a white crystal powder solid. May cause slight eye irritation.

Hazard Statements

May cause slight eye irritation.

Potential Health Effects: Eyes

Significant irritation would not be expected upon contact with the eyes.

Potential Health Effects: Skin

No skin irritation can be expected from single short-term exposure to this product. Prolonged or repeated contact may produce some irritation.

Potential Health Effects: Ingestion

Ingestion of small amounts would not be expected to produce toxicity. However, ingestion of large amounts may produce gastrointestinal disturbances.

Potential Health Effects: Ingestion

Inhalation of vapors form this product would not be expected to produce adverse effects.

HMIS Ratings: Health: 0 Fire: 1 Reactivity: 0 Pers. Prot.: safety glasses with side shields.

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

* * * Section 4 – First Aid Measures * * *

First Aid: Eyes

Immediately flush eyes with sufficient amount of water. Seek medical attention if irritation persists.

First Aid: Skin

For skin contact, wash with soap and water. If irritation develops or persists, seek medical attention.

First Aid: Ingestion

If material is swallowed in large amounts, get medical attention. Do not induce vomiting unless directed to do so by medical personnel.

First Aid: Inhalation

If respiratory irritation occurs upon inhalation, remove to fresh air. Seek medical attention if symptoms develop or persist.

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First Aid: Notes to Physician

None.

* * * Section 5 – Fire Fighting Measures * * *

Flash Point: Not applicable Method Used: Not applicable

Upper Flammable limit(UFL): Not applicable

Auto Ignition: Not available

Lower Flammable Limit (LFL): Not applicable

Flammability Classification: Non - flammable

Rate of Burning: Not available

General Fire Hazards

Product is an powder solid which will not burn.

Hazardous Combustion Products

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Extinguishing Media

Use media suitable for surrounding fire.

Fire Fighting Equipment/Instructions

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

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

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

* * * Section 6 – Accidental Release Measures * * *

Containment Procedures

Contain the discharged material.

Clean-Up Procedures

Wear appropriate protective equipment and clothing during clean-up. Absorb spilled material with inert absorbent material.

Evacuation Procedures

None necessary.

Special Procedures

None.

* * * Section 7 – Handling and Storage * * *

Handling Procedures

Avoid prolonged or repeated skin contact with this material. Avoid getting this material into contact with your eyes. Wash thoroughly after handling.

Storage Procedure

Keep container tightly closed and store at room temperature.

* * * Section 8 – Exposure Controls / Personal Protection * * *

Exposure Guidelines

A: General Product Information

Exposures should be minimized in accordance with good industrial hygiene practices.

B: Component Exposure Limits

ACGIN, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls

Ventilation should be sufficient to effectively remove and prevent buildup of vapors or mists generated during handling.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes / Face

Wear appropriate eye protection.

Personal Protective Equipment: Skin

Wear impervious gloves for prolonged contact.

Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively remove and prevent buildup of vapors or mists, appropriate NIOSH approved respiratory protection should be provided.

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Personal Protective Equipment: General

Use good industrial hygiene practices in handling this material.

* * * Section 9 – Physical & Chemical Properties * * *

Appearance : White powder **Odor :** None

Physical State: solid
Vapor Pressure: Not available
Boiling Point : not available
Boilbility(H20): Soluble
Freezing Point : Not available
Softening Point : Not applicable
Viscosity : Not available
Viscosity : Not available
Bulk Density: Not available
Physical Pensity : Not available
Physical Pensity : Not available
Physical Pensity : Not available
Vapor Density : Not available
Physical Physical Pensity : Not available
Particle Size : Mesh 20--150
Evaporation Rate : Not available
Bulk Density: Not available

Percent Volatile: Not available Molecular Weight: 152.15

Physical Properties: Additional Information

None.

* * * Section 10 Chemical Stability & Reactivity Information * * *

Chemical Stability

Stable

Chemical Stability: Conditions to Avoid

None

Incompatibility

This product may react with oxidizing agents.

Hazardous Decomposition

Upon decomposition, this product emits carbon monoxide, carbon, dioxide and/or low molecular weight hydrocarbons.

Hazardous Polymerization

Hazardous polymerization will not occur.

* * * Section 11 – Toxicological Information * * *

Acute Toxicity

A: General Product Information

No data available for this product.

B: Component Analysis - LD50 / LC50

No LD50 / LC50's are available for this product's components.

Carcinogenicity

A: General Product Information

No carcinogenicity data available for this product.

B: Componet Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Epidemiology

No epidemiological data is available for this product.

Neurotoxicity

No data available for this product.

Mutagenicity

No data available for this product.

Teratogenicity

No data avlilable for this product.

Other Toxicological Information

None available.

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* * * Section 12 – Ecological Information * * *

Ecotoxicity

No data available for this product.

Environmental Fate

No data available for this product.

* * * Section 13 – Disposal Considerations * * *

US EPA Waste Number & Descriptions

A: General Product Information

Empty container retains product residue. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Empty container, remove all product residue. Puncture or otherwise destroy empty container before disposal.

B: Component Waste Numbers

No EPA Waste numbers are applicable for this product's components.

Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulation.

* * * Section 14 – Transportation Information * * *

US DOT Information

Shipping Name: Not regulated Hazard Class: Not regulated

UN/NA#: None
Packing Group: None
Required Label (s): None
Additional Info.: None

International Transportation Regulations

Not regulated as dangerous goods.

* * * Section 15 – Regulatory Information * * *

US Federal Regulations

A: General Product Information

No information available

B: Component Analysis

None of this products components are listed under SARA Section 302(40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

A: General Product Information

No information available

B: Component Analysis - State

None of this products components are listed on the state lists from CA, FL, MA, MN, NJ, or PA.

Other Regulations

A: General Product Information

All ingredients are NOT confirmed on the TSCA Chemical Substance Inventory.

FOR TSCA – EXEMPT PURPOSES ONLY!

B: Component Analysis - Inventory

Component	CAS#	TSCA	DSL	EINECS
Assay (on dry basis)	87-99-0	Yes	Yes	Yes
Water	7732-18-5	Yes	Yes	Yes

C: Component Analysis – WHMIS IDL

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No components are listed in the WHMIS IDL.

* * * Section 16 – Other Information * * *

Other Information

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

Key / Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; NFPA = National Fire Protection Association; HMIS = Hazardous Material Identification System; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act; DSL = Canadian Domestic Substance List; EINECS = European Inventory of New and Existing Chemical Substances; WHMIS = Workplace Hazardous Materials Information System.

End of MSDS# LJ-1507