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DATE PREPARED: 9/22/2015

Section 1. Product and Company Identification

Product Name Pullulan
CAS Number 9057-02-7

Parchem - fine & specialty chemicals EMERGENCY RESPONSE NUMBER

415 Huguenot Street CHEMTEL

New Rochelle, NY 10801

Toll Free US & Canada: 1 (800) 255-3924

All other Origins: 1 (813) 248-0585

parchem.com info@parchem.com Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

GHS Classification: Not hazardous

GHS Label Elements
Pictograms: N/A
Signal word: N/A

Hazard and precautionary statements

GHS Precautionary Statements
Prevention: No precautionary phrases.
Response: No precautionary phrases.
Storage: No precautionary phrases.
Disposal: No precautionary phrases.

Other Hazards which do not result in Classification: Not classified as flammable but will

burn.

Emergency Overview: The product is regarded as a safe material produced from starch by cultivating a non-pathogenic and non-toxigenic microorganism, *Aureobasidium pullulans*.

Section 3. Composition / Information on Ingredients

Common Name Pullulan

Synonym(s) Poly[6)-a-D-glucopyranosyl- $(1 \rightarrow 4)$ -a-D-glucopyranosyl- $(1 \rightarrow 4)$ - $(1 \rightarrow 4)$

glucopyranosyl- $(1 \rightarrow)$

Formula (C₁₈H₃₀O₁₅)n **CAS Number** 9057-02-7

COMPONENT	CAS NUMBER	CONCENTRATION
Pullulan	9057-02-7	≥ 90%



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Section 4. First Aid Measures

General Information: Not expected to be a health hazard when used under normal conditions.

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing.

Skin Contact: Immediately take off all contaminated clothing. Wash areas thoroughly with water. **Eye Contact:** Immediately flush eyes with a sufficient amount of water. Remove contact lenses if

easy to do so. Continue rinsing.

Ingestion: If material is swallowed in large amounts, get medical attention. Consult a doctor, if symptoms develop or persist after taking the measures above.

Section 5. Firefighting Measures

Clear fire area of all non-emergency personnel.

Extinguish Media: Dry chemical, foam, carbon dioxide, water fog **Unsuitable Extinguishing Media:** No information available.

Special Fire Fighting: Position upwind. Keep unnecessary personnel away. Move containers out of hazard area if safe to do so. Keep the containers cool by spraying water if exposed to heat or fire. Cool containers with flooding quantities of water until well after until well after the fire is out. **Protection for Firefighter:** Wear self-contained breathing apparatus and protective clothing to

prevent contact with skin and eyes.

Section 6. Accidental Release Measures

Avoid contact with spilled or released material. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.

Personal Precautions: Use personal protection recommended in Chapter 8. Avoid breathing mist and contact with skin and eyes.

Environment Procedures: Prevent entry into ditches, sewers and waterways.

Containment and Cleanup: Sweep up the spill and dispose of in general trash. Wash residual with water. Spill area can be washed with water for approved disposal. Follow all regulatory requirements for non-hazardous waste disposal.

Section 7. Handling and Storage

Handling: Use in a well-ventilated place. If necessary, use personal protection recommended in Section 8. Wash thoroughly after handling. When handling, do not eat, drink, or smoke. Coloration and decomposition may occur by moisture absorption.

Storage: Keep container tightly closed. Keep in a cool, dark and dry place in order to maintain the quality. Keep securely closed when not in use. Keep away from food, drink and animal feeding stuffs.



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Section 8. Exposure Controls / Personal Protection

Exposure Limit Value: Not set.

Exposure Controls: No specific controls are needed. If necessary, the following personal

protective equipment and materials are applied.

Personal Protective Equipment and Materials

Respiratory Protection: If ventilation is not sufficient to effectively remove and prevent buildup of

dusts, appropriate respiratory protection should be provided.

Hand Protection: Wear impervious gloves for prolonged contact.

Eye/Face Protection: Wear appropriate eye protection.

Skin Protection: Wear impervious apron and/or boots for skin protection in case scattering.

Section 9. Physical and Chemical Properties

Appearance: White to light yellowish white powder

Odor: Odorless or slight characteristic odor **pH (10% Water Solution):** 5.0 - 7.0 **Aqueous Dissolution:** Soluble

Specific Gravity: 0.35 (Bulk specific gravity)

Melting Point: 250°C Flash Point: Ca. 280°C

Section 10. Stability and Reactivity

Chemical Stability: Stable under ordinary storage conditions. Possibility of Hazardous Reactions: Not likely to occur.

Conditions to Avoid: Avoid accumulation of airborne dusts. Avoid hot and humid storage. Materials to Avoid: Avoid contacting strong oxidizing agents, which may react with the product. Hazardous Decomposition Products: In case of fire, the product emits carbon monoxide, carbon dioxide and/or low molecule weight hydrocarbons.

Section 11. Toxicological Information

Acute Oral Toxicity: LD50 $\geq 14,280 \text{ mg/kg}$ and $\geq 24,134 \text{ mg/kg}$ in male dd mice and male RF mice by oral administration, respectively.

Sub-Acute Oral Toxicity: NOAEL > 7,914 mg/kg/day and > 9,674 mg/kg/day in male and female rats by oral (feeding) administration, respectively (90 days)

Chronic Toxicity: NOAEL > 4,450 mg/kg/day and > 5,080 mg/kg/day in male and female rats by oral (feeding) administration, respectively (62 weeks)

Skin Irritation/Sensitization: No dermal irritation (25%, RIPT, Human).

Eye Damage/Irritation: Not cause any negative effect (30%, Bovine cornel opacity and

permeability test), Practically no irritation (100%, Hen's egg test).



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Germ Cell Mutagenicity: No data available [Not mutagenicity (standardized AMES assay, and

mouse micronucleus and chromosome aberration assays)]

Carcinogenicity: No data available

Reproductive Toxicity: No data available

Specific Target Organ Toxicity/Single Exposure: No data available Specific Target Organ Toxicity/Repeated Exposure: No data available

Aspiration Hazard: No data available

Section 12. Ecological Information

Hazardous to the Aquatic Environment: No data available

Hazardous to the Ozone Layer: Not data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

International Transportation Regulations

Sea: Not applicable **Air:** Not applicable

United Nations Number: None

The product to be kept in sealed container. Keep away from moisture, high temperatures, and direct sunlight. Container should be protected from breakage. Additional care should be taken to comply with the conditions listed under Section 7.

Section 15. Regulatory Information

The product is not subject to classification according to the sources of literature known to us. Please refer to national measures that may be relevant.

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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