

MATERIAL SAFETY DATA SHEET

Section 1 - Product and Company Identification

Product Name: **GFC Calibration Standards 180-788K**
Agilent Part Number: **1535-4546**
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Distributed By: **Agilent Technologies, Inc.**
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European Information Telephone No.: **+49-(7243) 602-200**

When Calling From Outside the USA, Dial Your International Access Code for the USA, then 1, then 302-633-8777

Section 2 - Composition/Information on Ingredients

A set of 10 x 0.5 gram bottles Pullulan (polysaccharide) powder [9067-02-7] with a molecular weight range of 180 to 788,000

Chemical Families: Polysaccharide

Chemical Synonyms: Pullulan also known as *polysaccharide*

Section 3 - Hazards Identification

May be irritating to eyes, skin, upper respiratory and digestive tract but is generally regarded as a low industrial hazard.

Section 4 - First-Aid Measures

Inhalation: Remove to fresh if breathing is difficult, give oxygen. If not breathing administer artificial respiration. **Skin Contact:** In case of contact wash skin with soap and copious amounts of water. Wash contaminated clothing before reusing. **Eye Contact:** Contamination of the eyes should be treated by irrigation with copious amounts of water by separating the eyelids with fingers. If redness or swelling persists, contact physician. **Ingestion:** If swallowed, wash out mouth with water, providing victim is conscious. Do not induce vomiting. Seek medical attention.

Section 5 - Fire-Fighting Measures

Extinguishing Media: Carbon dioxide, dry chemical powder, water spray or standard foam. **Special Fire Fighting Procedures:** Wear full protective clothing and positive pressure breathing apparatus certified by NIOSH when fighting chemically related fires. **Unusual Fire and Explosion Hazards:** None

Section 6 - Accidental Release Measures

Due to the small quantity involved, a leaking container may be placed in a plastic bag containing absorbent and disposed of a non-hazardous waste according to local regulations. Used absorbent should be disposed of in a similar manner. See Section 15.

Personal protective equipment should be worn during remediation of accidental releases according to the nature and quantity of the material involved. See Section 8 for a description of recommended personal protective equipment.

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Section 7 - Handling and Storage

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Minimize dust generation and accumulation.

Store in a cool, dry well-ventilated area away from incompatibles.

Section 8 - Exposure Controls/Personal Protection

Ventilation: Adequate ventilation is required to protect personnel from exposure to chemical vapors exceeding PEL and to minimize fire hazards. See Section 15 for regulatory standards of exposure.

Respiratory: Use NIOSH approved respirator equipment.

Eyes: Safety glasses are considered minimum protection. Chemical safety goggles or face shield may be necessary depending on quantity of material and conditions of use. Emergency eye wash fountains should be available in the vicinity of any possible exposure.

Skin: Chemical-resistant protective gloves and clothing are recommended. The choice of protective gloves or clothing must be based on chemical resistance and other user requirements. Generally BUNA-N offers acceptable chemical resistance. Individuals who are acutely and specifically sensitive to this chemical may require additional protective clothing.

Section 9 - Physical and Chemical Properties

Flash Point (Method Used):	None
Explosion Potential:	LEL (NA)/UEL (NA)
Specific Gravity:	ND
Bulk Density:	ND
Melting Point (Degree C):	ND
Evaporation Rate (n-butyl acetate =1)	<1
Boiling Point (Degree C):	ND
Vapor Pressure (mm Hg at 25°C):	Negligible
Vapor Density (Air =1)	NA
Odor Threshold:	ND
Octanol/Water Partition Coefficient:	ND
Solubility in Water:	Insoluble (X)/Soluble()
Appearance and Odor:	White powder

Section 10 - Stability and Reactivity

Stability: Stable (x) / Unstable ()

Conditions to Avoid: Poor ventilation, strong oxidizing agents.

Incompatibility (Materials to Avoid): Strong oxidizing agents. **Hazardous**

Decomposition or Byproducts: Incomplete combustion may produce carbon monoxide.

Hazardous Polymerization: May Occur ()/Will Not Occur(X)

Section 11 - Toxicological Information

Route(s) of Entry: Inhalation? **Yes** Skin? **Yes** Ingestion? **Yes**
Health Hazard Acute/Chronic: May be irritating to eyes and skin.
Carcinogenicity: NTP? **No**
IARC Monographs? **No**
OSHA Regulated? **No**
OTHER? **No**

Medical Conditions Generally Aggravated by Exposure: NA

Section 12 - Ecological Information

No information

Section 13 - Disposal Considerations

Non-hazardous waste

Section 14 - Transport Information

DOT Regulations:
Shipping Name: Non-Regulated

IATA-DGR Regulations:
Shipping Name: Non-Regulated

RID/ADR: NA
ADNR: ND

Section 15 - Regulatory Information

SARA Reporting: NA
OSHA Labeling Requirements: None
TSCA Inventory List: This material is on the list

Section 16 - Other Information

Unless otherwise noted, the above information pertains only for the solvent and similar types of components in the sample. When no toxicity data is provided, it is prudent to handle this chemical as hazardous. Furthermore, since individual chemical hypersensitivity cannot be predicted, every chemical should be handled with due respect.

EUROPEAN INFORMATION

No information

KEY TO ABBREVIATIONS

ACGIH - American Conference of Governmental Industrial Hygienists`
ADNR - Regulations concerning the carriage of dangerous goods on the Rhine
CAS - Chemical Abstract Service
DOT - US. Department of Transportation 49 Code of Federal Regulations
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association- Dangerous Goods Regulation
LEL - Lower Explosion Limit
NA - Not Applicable
ND - No Data
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PEL - Permissible Exposure Limit
RID/ADR - Regulations Concerning the International Carriage of Dangerous Goods by Rail/European Agreement Concerning the International Carriage of Dangerous Goods by Road
TLV - Threshold Limit Value
TWA - Time Weighted Average
UEL - Upper Explosion Limit
[] - Indicates CAS Number