



SIGMA-ALDRICH

Material Safety Data Sheet

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Section 1 - Product and Company Information

Product Name: **β -Galactosidase, From Aspergillus oryzae**
Product Number: G5160
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052
Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
B-GALACTOSIDASE (SOLID)	9031-11-2	No	232-864-1	

Formula:
Synonyms: E.C. 3.2.1.23, beta-Galactosidase, Hydrolact, Lactase, beta-Lactosidase, beta-D-Lactosidase, Lactozym, Maxilact, Oryzatym, S 2107, SL 396, Sumiklat, Tilactase

Section 3 - Hazards Identification

Emergency Overview
Caution: Avoid contact and inhalation.

HMIS Rating
Health: 1 Flammability: 0 Reactivity: 0

NFPA Rating
Health: 1 Flammability: 0 Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media
Suitable
Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Avoid contact with eyes, skin, and clothing. Avoid inhalation. Avoid prolonged or repeated exposure.

Storage
Suitable
Keep tightly closed. Store away from heat. Store at -20°C

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath.

Personal Protective Equipment
Respiratory
Government approved respirator.
Hand
Compatible chemical-resistant gloves.
Eye
Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance
Physical State
Solid

Molecular Weight: N/A

pH: N/A
BP/BP Range: N/A

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Safety and Environmental
Health

MP/MP Range N/A
Freezing Point N/A
Vapor Pressure N/A
Vapor Density N/A
Saturated Vapor Conc. N/A
SG/Density N/A
Bulk Density N/A
Odor Threshold N/A
Volatile% N/A
VOC Content N/A
Water Content N/A
Solvent Content N/A
Evaporation Rate N/A
Viscosity N/A
Partition Coefficient N/A
Decomposition Temp. N/A
Flash Point °F N/A
Flash Point °C N/A
Explosion Limits N/A

Flammability N/A
Autoignition Temp N/A
Solubility N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hazardous Decomposition Products
Nature of decomposition products not known.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
May cause skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
May cause eye irritation.
Inhalation
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion
May be harmful if swallowed.

Sensitization
Sensitization
Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: LW5840000

Toxicity Data

Intraperitoneal - Rat: 660 MG/KG (LD50)
Remarks: Behavioral:Somnolence (general depressed activity).
Behavioral:Muscle weakness.

Subcutaneous - Rat: 4090 MG/KG (LD50)
Remarks: Behavioral:Somnolence (general depressed activity).
Behavioral:Muscle weakness.

Intraperitoneal - Mouse: 630 MG/KG (LD50)
Remarks: Behavioral:Somnolence (general depressed activity).
Behavioral:Muscle weakness.

Subcutaneous - Mouse: 1470 MG/KG (LD50)
Remarks: Behavioral:Somnolence (general depressed activity).
Behavioral:Muscle weakness.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

US Classification and Label Text
US Statements
Caution: Avoid contact and inhalation.

United States Regulatory Information
SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: No

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty

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. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

