β-Galactosidase (GAH-201)
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Safety Data Sheet

1 Chemical product and company identification

Identification of the product	β-Galactosidase
Product Code	
SUPPLIER	
Name	TOYOBO CO.,LTD.
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Department	Biotechnology Overseas Sales and Marketing Department
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Fax No.	+81-6-6348-3833
Recommended uses and restrictions on use	diagnostic product

2 Hazards identification

Important hazards	The product might cause allergic reactions upon inhaling or skin contact because of the protein contained.
GHS classification	Classification not possible

3 Composition/information on ingredients

Chemical product (a substance or a mixture)	Mixture
〈Substance〉	
Systematic chemical name	β-Galactosidase
CAS No.	9031-11-2
concentration or concentration ranges	ca. 70%(W/W)

4 First-aid measures

Inhalation	Remove to fresh air. Consult a physician when unpleasantness occurs.
Skin contact	Wash off with plenty of water. Consult a physician when inflammation on the skin occurs.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Swill plentiful amount of water or milk for immediate vomiting, consult a physician.

5 Fire-fighting measures

Extinguishing media	Water spray, foam, dry chemical powder, or carbon dioxide etc.
Specific hazards	No information available.
Specific extinguishing methods	Fire-fighting is done from the windward side.
Precautions for fire-fighters 〈special protective equipment〉	In case of large fires, wear respiratory protection.

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6 Accidental release measures

Personal precautions, protective equipment, and emergency procedure	Wear protective gear to avoid eye/skin contact and inhalation. Collection work is done from the windward side.
Environmental precautions	High concentrated waste fluid should not be directly discharged into rivers.
Methods and materials for containment and methods and materials for cleaning up	Use cloth, paper or anything similar to soak up the solution leaking out of the container. Take up under vacuum using dust collecting filter, wash residual spill with copious amounts of water.(Waste water should be treated with activated sludge etc.)

7 Handling and storage

Handling 〈precautions for safe handling〉

Technical measures	Wear protective gear to avoid eye/skin contact and inhalation.
Precautions 〈local/total ventilation〉	Do not drop the container to prevent the content popping out.

Storage 〈conditions for safe storage〉

Technical measures	Keep sealed container in freezer and store under -20℃.

〈suitable storing conditions and unsuitable storing conditions〉

Incompatible substances and mixtures	None specified.
Storage Conditions	Store under -20℃ to avoid deactivating.
Packaging Materials	Use the initial container of the product.

8 Exposure controls and personal protection

Engineering controls	Provide eye washing apparatus nearby.
Personal protective equipment	
Respiratory protection	Dust mask
Hand protection	Protecting gloves(rubber or plastic gloves etc.)
Eye protection	Safety goggles
Skin and body protection	Long sleeve working wear

9 Physical and chemical properties

Physical State, Form, Colour	Powder / White
Odour	No odour
pH	ca. pH7.0 (1% W/V)
Flash point	No information available.
Explosiveness	No information available.
Density/relative density	No information available.
Solubility(ies)	Easily soluble in water.

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10 Stability and reactivity

Chemical stability and hazardous reactions	Stable at temperatures below -20℃. When left for long at room temperature, proteins might be degraded, which does not cause any hazardous reaction.
Conditions to Avoid	Prolonged storage at temperatures higher than room temperature and high humidity.
Incompatible materials	Any materials which dissolve or destroy proteins such as strong acid or alkali.
Hazardous decomposition products	No information available.

11 Toxicological information

Acute toxicity	No information available.
Skin irritation/corrosion	No information available.
Eye damage/irritation	No information available.
Respiratory or skin sensitization	Might cause allergic reactions upon inhaling or skin contact because of the protein contained.
Reproductive cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
Specific target organ toxicity-single exposure	No information available.
Specific target organ toxicity-repeated exposure	No information available.
Aspiration hazard	No information available.

12 Ecological information

Ecotoxicity	No information available.
Persistence and degradability	This product is biodegradable and does not remain on the environment for long.
Bioaccumulative potential	Considered to be not bioaccumulative.
Mobility in soil	No information available.

13 Disposal considerations

Waste from residues	Dispose of in accordance with all applicable local and national laws and regulations.
Contaminated container and Contaminated packaging	Wash with copious amounts of water and waste conforming to local regulations depending on the type of the material.

14 Transport information

International Regulations	None specified (Not classified as hazardous goods as per the UN recommendation)
Specific precautions transport measures and conditions	Keep at temperatures below -20℃.

15 REGULATORY INFORMATION

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Regulations	Follow all of laws and regulaitos in your country.

16 OTHER INFORMATION

Notice	The contents specified here is made based on the documents, information or data which are currently available and subject to revision in the future. TOYOBO makes no warranty and assumes no liability whatsoever in connection with any use of this information.