1 Product and Company Identification
Product Name Glucose dehydrogenase
Product Code GLD-311
Supplier
Name TOYOBO CO.,LTD
Address 2-8, Dojima-Hama 2-chome, Kita-ku, Osaka 530-8230, Japan
Department Biotechnology Overseas Sales and Marketing Department
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Recommended use and restrictions on use diagnostic product

2 Hazard Identification
Most Important Hazards and Effects The product might cause allergic reactions upon inhaling or skin contact because of the protein contained. Classification not possible

3 Composition/Information on Ingredients
Substance/Mixture Mixture
Chemical Nature Glucose dehydrogenase
CAS# 9028-53-9
Amounts contained ca. 45%(W/W)
Ingredients Contributing to the Hazard No information available.

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 Wash off with running water for 15 minutes or longer immediately, consult a physician afterwards.
Ingestion Swill plentiful amount of water or milk for immediate vomiting, consult a physician.

5 Fire Fighting Measures
Extinguishing Media Water spray, dry chemical powder, or carbon dioxide etc.
Protection of Firefighters Avoid working at leeward.

6 Accidental Release Measures
Personal Precautions Wear protective gear to avoid eye/skin contact and inhalation. Do not work at leeward.
Environmental Precautions High concentrated waste fluid should not be directly discharged into rivers.
Methods 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 Technical Measures Wear protective gear to avoid eye/skin contact and inhalation. Do not drop the container to prevent the content popping out.
Precautions None specified.
Safe Handling Advice Wear protective gear, avoiding contact on eye, skin and cloths.
Storage Technical Measures Keep sealed container in freezer.
Incompatible Products None specified.
Storage Conditions Store under -20°C.
Packaging Materials Use the initial container of the product.
Material Safety Data Sheet

8 Exposure Controls/Personal Protection
Engineering Measures
Provide shower and vanity unit nearby.

Personal Protective Equipment
Respiratory Protection
Protecting mask.
Hand Protection
Protecting gloves (rubbers or plastic gloves etc.).
Eye Protection
Safety goggles.
Skin and Body Protection
Long sleeve working wear.

9 Physical and Chemical Properties
Physical State
Powder
Colour/Odour
White/No odour
pH
Approximate pH 7.0 in the case of 10 mg/ml in water.
Decomposition Temperature
No information available.
Flash Point
No information available.
Density
No information available.
Solubility
Easily soluble in water.

10 Stability and Reactivity
Stability
Stable at temperatures below -20°C. Proteins, when left for long at room temperature, might be degraded, which does not cause any hazardous reaction though.

Possible hazard reactions at specific condition
Not specified.

Conditions to avoid
Prolonged storage at temperatures higher than room temperature and high humidity.

Materials to avoid
Any materials which dissolve or destroy proteins such as strong acid or alkali.

Hazardous Decomposition Products
No information available.

11 Toxicological Information
Acute Toxicity
Not available.
Local Effects
Not available.
Sensitization
Not available.

12 Ecological Information
Persistence/Degradability
Glucose dehydrogenase decomposes and does not remain on the environment for long, since it consists of protein.

13 Disposal Considerations
Waste from Residues
Dispose of protein in accordance with all applicable local and national laws and regulations.

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 material as per the UN recommendation).
Specific Precautions
Keep at temperatures below -20°C.

15 Regulatory Information
Regulations
None specified.

16 Other Information
Notice
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