1 Chemical Product and Company Identification

Identification of the product

Product Name: Glutamate dehydrogenase
Product Code: GTD-211

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
Phone: +81-6-6348-3843
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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.

GHS classification
Classification not possible

3 Composition/Information on Ingredients

Substance/Mixture
Mixture

Chemical Identity
Systematic chemical name: Glutamate dehydrogenase
CAS No.: 9001-46-1
Concentration or concentration range:
ca. 40%
ca. 60%

Ingredients Contributing to the Hazard
No information available

4 First Aid Measures

Inhalation
Remove person to fresh air and keep comfortable for breathing.

Skin Contact
If skin irritation occurs: Get medical advice/attention.

Eye Contact
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

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.
   Environmental Precautions
   Highly 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.
   Storage
   Technical Measures
   Keep sealed container in freezer.
   Incompatible substances or mixtures
   None specified.
   Storage Conditions
   Store under -20℃.
   Packaging Materials
   Use the initial container of the product.

8 Exposure Controls/Personal Protection
   Engineering Measures
   Set local ventilation equipment.
   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
   No information available.
   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 under higher temperature than room temperature and high humidity.

Materials to avoid
Strong oxidant

Hazardous Decomposition Products
Nitrogen oxide, sulfur oxides

11 Toxicological Information

Acute Toxicity
No information available.

Skin corrosion/irritation
No information available.

Eye damage/irritation
No information available.

Sensitization
Might cause allergic reactions upon inhaling or skin contact because of the protein contained.

Germ cell mutagenicity
No information available.

Carcinogenicity
No information available.

Toxic to reproduction
No information available.

Specific target organ toxicity (Single exposure)
No information available.

Specific target organ systemic toxicity (Repeated exposure)
No information available.

Aspiration toxicity
No information available.

12 Ecological Information

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

13 Disposal Considerations

Waste from Residues
Dispose of 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
Follow all of the laws and regulations in your country.
16 Other information

notice

The information shall not be taken as being all inclusive and is to be used only a guide. All materials and mixtures may be present unknown hazards and should be used with caution. The SDS is subject to revision as new information becomes available. The information in this SDS, to the best of our knowledge, is accurate and correct. However, TOYOBO makes no warranty and assumes no liability whatsoever in connection with any use of this information.