

## 1. Product and Company Identification

**Material name** Glucose Dehydrogenase (FAD Dependent)  
**Version #** 01  
**Issue date** 01-16-2013  
**Revision date** -  
**Supersedes date** -  
**CAS #** Mixture  
**Part No.** GLDE-70-1192  
**Product use** Enzyme reagent for laboratory or in vitro diagnostic manufacturing use.  
**Manufacturer information**  
**Corporate Headquarters** Sekisui Diagnostics, LLC  
31 New York Avenue, Framingham, MA 01701 USA  
www.sekisuidiagnostics.com  
Phone: 800-332-1042  
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Access code 333512

## 2. Hazards Identification

**Physical state** Solid.  
**Appearance** Yellow powder.  
**Emergency overview** WARNING  
The chemical, physical and toxicological properties of this preparation have not been thoroughly characterized.  
May cause allergic respiratory reaction.  
**OSHA regulatory status** This product is hazardous according to OSHA 29 CFR 1910.1200.  
**Potential health effects**  
**Routes of exposure** Inhalation. Eyes.  
**Eyes** May cause eye irritation. Exposed individuals may experience eye tearing, redness, and discomfort.  
**Skin** Prolonged skin contact may cause redness, irritation and dry skin.  
**Inhalation** May cause allergic respiratory reaction. Although there is no evidence that the enzyme(s) in this preparation induces specific respiratory hypersensitivity, all proteins are potential respiratory allergens and may result in respiratory sensitization in certain individuals after repeated and/or prolonged inhalation exposure, producing mild to severe symptoms similar to pollen allergy or asthma, including mucous membrane or eye irritation, itching of the skin or eyes, sneezing, nasal or sinus congestion, coughing, and tightness in the chest. These symptoms may develop as late as 12 hours after exposure.  
**Ingestion** May cause discomfort if swallowed.  
**Target organs** Eyes. Respiratory system.  
**Chronic effects** Repeated inhalation may result in respiratory sensitization.  
**Signs and symptoms** Ingestion may cause irritation and malaise.  
**Potential environmental effects** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Glucose dehydrogenase	37250-84-3	100

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First Aid Measures

### First aid procedures

<b>Eye contact</b>	In case of contact, immediately flush eyes with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. Get medical attention if irritation persists.
<b>Skin contact</b>	For skin contact flush with large amounts of water while removing contaminated clothing. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.
<b>Ingestion</b>	If material is ingested, immediately contact a poison control center.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. The effects might be delayed.
<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire Fighting Measures

**Flammable properties** Material may burn when exposed to sufficient heat.

### Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with water spray, carbon dioxide, dry chemical or material appropriate for the surrounding fire.
<b>Unsuitable extinguishing media</b>	None known.

### Protection of firefighters

<b>Specific hazards arising from the chemical</b>	Material may form irritating and toxic gaseous oxides at high temperatures.
<b>Protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** Use standard firefighting procedures and consider the hazards of other involved materials.

## 6. Accidental Release Measures

**Personal precautions** Avoid dust formation. Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Environmental precautions** Do not allow to enter drains, sewers or watercourses.

**Methods for containment** Avoid generation and spreading of dust.

**Methods for cleaning up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Dispose of waste in accordance with all applicable federal, state, local and provincial environmental regulations, per Section 13.

**Other information** Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

**Handling** Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin and eyes. Persons susceptible for allergic reactions should not handle this product. Wash thoroughly after handling. Observe good industrial hygiene practices.

**Storage** Store at -20°C (-4°F). Store in a closed container away from incompatible materials.

## 8. Exposure Controls / Personal Protection

**Occupational exposure limits** No exposure limits noted for ingredient(s).

**Exposure guidelines** Follow standard monitoring procedures.

**Engineering controls** Use local exhaust ventilation. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### Personal protective equipment

<b>Eye / face protection</b>	Wear approved safety glasses or goggles.
<b>Skin protection</b>	Wear lab coat or other protective garments. Remove contaminated clothing promptly.
<b>Respiratory protection</b>	Under normal conditions, respirator is not normally required. Wear NIOSH approved respirator appropriate for airborne exposure at the point of use.

## 9. Physical & Chemical Properties

Appearance	Yellow powder.
Physical state	Solid.
Form	Powder.
Color	Yellow.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Boiling point	Not available.
Melting point/Freezing point	Not available.
Solubility (water)	Soluble.
Specific gravity	Not available.
Flash point	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.

## 10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Dust generation. Heat, flames and sparks.
Incompatible materials	Strong oxidizers, strong acids, and strong bases.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating gases and vapors.
Possibility of hazardous reactions	Polymerization will not occur.

## 11. Toxicological Information

Sensitization	May cause allergic respiratory reaction.
Acute effects	May cause discomfort if swallowed.
Local effects	May cause eye, skin and respiratory tract irritation.
Chronic effects	Repeated inhalation may result in respiratory sensitization.
Carcinogenicity	No data available.
Epidemiology	No epidemiological data is available for this product.
Mutagenicity	Not classified.
Reproductive effects	No data available.
Symptoms and target organs	Ingestion may cause irritation and malaise.
Further information	No other specific acute or chronic health impact noted.

## 12. Ecological Information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulation / Accumulation	Not available.

**Mobility in environmental media**                      The product is soluble in water.

### 13. Disposal Considerations

**Waste codes**                      The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Disposal instructions**                      Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contaminated instruments and surfaces should be disinfected in accordance with your employer's chemical-specific and universal/standard precautions.

**Waste from residues / unused products**                      Dispose in accordance with all applicable regulations.

**Contaminated packaging**                      Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport Information

#### DOT

Not regulated as a hazardous material by DOT.

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

#### TDG

Not regulated as dangerous goods.

### 15. Regulatory Information

**US federal regulations**                      This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. This mixture is a component of an in vitro diagnostic device regulated by the U.S. Food and Drug Administration.

#### **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

#### **Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

#### **CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)**

None

#### **Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**                      Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance (40 CFR 355, Appendix A)**                      No

**Section 311/312 (40 CFR 370)**                      Yes

**Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)**                      Not controlled

**Canadian regulations**                      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.

**WHMIS status**                      Controlled

**WHMIS classification**                      D2A - Other Toxic Effects-VERY TOXIC

**WHMIS labeling**



**State regulations**                      This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

Not regulated.

**Mexico regulations**

This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

**16. Other Information**

**Recommended restrictions**

Use in accordance with supplier's recommendations.

**Further information**

HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**

Health: 2\*  
Flammability: 0  
Physical hazard: 0

**NFPA ratings**

Health: 2  
Flammability: 0  
Instability: 0

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