

## 1. Product and Company Identification

**Material name** Glucose Oxidase HPS150  
**Version #** 01  
**Issue date** 03-07-2013  
**Revision date** -  
**Supersedes date** -  
**CAS #** Mixture  
**Product code** GLOX-70-6457  
**Product use** Used in the manufacture of glucose monitoring reagents and devices.  
**Manufacturer information**  
**Corporate Headquarters** Sekisui Diagnostics, LLC  
31 New York Avenue, Framingham, MA 01701 USA  
www.sekisuidiagnostics.com  
Phone: 800-332-1042  
Americas 1-760-476-3962  
**Emergency Telephone Numbers** Europe, Middle East & Africa +1-760-476-3961  
Asia Pacific +1-760-476-3960  
Access code 333512

## 2. Hazards Identification

**Physical state** Solid.  
**Appearance** Yellow to orange free flowing powder.  
**Emergency overview** WARNING  
May cause allergic respiratory reaction.  
The chemical, physical and toxicological properties of this preparation have not been thoroughly characterized.  
**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 oxidase	9001-37-0	80 - 85

**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>	Wash skin thoroughly with soap and water. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	Move to fresh air. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Get medical attention if irritation develops and persists.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. Symptoms may 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.

**Hazardous combustion products** Carbon oxides. Phosphorus oxides.

## 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** Environmental manager must be informed of all major releases.

**Methods for containment** Absorb spillage with non-combustible, absorbent material.

**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** Observe occupational exposure limits and minimize the risk of inhalation of dust and fumes.

### Personal protective equipment

<b>Eye / face protection</b>	Wear approved safety glasses or goggles.
<b>Skin protection</b>	Remove contaminated clothing promptly.

**Respiratory protection**

In case of inadequate ventilation or risk of inhalation of dust, use a suitable NIOSH approved respirator with an appropriate particulate filter.

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Yellow to orange free flowing powder.
<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>Color</b>	Yellow to orange.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	6.5
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Soluble.
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Dust generation. Heat, flames and sparks.
<b>Incompatible materials</b>	None known.
<b>Hazardous decomposition products</b>	None expected under normal conditions of use.
<b>Possibility of hazardous reactions</b>	Polymerization will not occur.

## 11. Toxicological Information

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

## 12. Ecological Information

<b>Ecotoxicity</b>	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.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.

<b>Bioaccumulation / Accumulation</b>	Not available.
<b>Mobility in environmental media</b>	The product is soluble in water.

### 13. Disposal Considerations

<b>Waste codes</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal instructions</b>	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.
<b>Waste from residues / unused products</b>	Dispose in accordance with all applicable regulations.
<b>Contaminated packaging</b>	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

<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
-------------------------------	--

#### 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)

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
--------------------------	--

<b>Section 302 extremely hazardous substance (40 CFR 355, Appendix A)</b>	No
---	----

<b>Section 311/312 (40 CFR 370)</b>	Yes
-------------------------------------	-----

<b>Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)</b>	Not controlled
--	----------------

<b>Canadian regulations</b>	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.
-----------------------------	---

<b>WHMIS status</b>	Controlled
---------------------	------------

<b>WHMIS classification</b>	D2A - Other Toxic Effects-VERY TOXIC
-----------------------------	--------------------------------------

#### WHMIS labeling



## Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

**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

**Disclaimer** The information above is provided in good faith. It is believed to be accurate and represents the best information currently available to us. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER TYPE, EXPRESSED OR IMPLIED, WITH RESPECT TO PRODUCTS DESCRIBED OR DATA OR INFORMATION PROVIDED, AND WE ASSUME NO LIABILITY RESULTING FROM THE USE OF SUCH PRODUCTS, DATA OR INFORMATION. Users should make their own investigations to determine the suitability of the information for their particular purposes, and the user assumes all risk arising from their use of the material. The user is required to comply with all laws and regulations relating to the purchase, use, storage and disposal of the material, and must be familiar with and follow generally accepted safe handling procedures. In no event shall Sekisui Diagnostics be liable for any claims, losses, or damages of any individual or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Sekisui Diagnostics has been advised of the possibility of such damages.