1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Catalog Number: 100983
Product name: PHOSPHOGLUCOSE ISOMERASE

Supplier: MP Biomedicals, LLC
Parc d'Innovation
BP 50067
67402 ILLKIRCH CEDEX
France

Emergency telephone number: "n° ORFILA" (01-45-42-59-59)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>EC No.</th>
<th>Classification</th>
<th>Notes</th>
<th>Annex No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHOGLUCOSE ISOMERASE</td>
<td>9001-41-6</td>
<td>&gt; 25%</td>
<td>232-603-1</td>
<td>--</td>
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</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Indication of Danger:
No declaration according to 67/548/EWG

4. FIRST AID MEASURES

General advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation: Move to fresh air. Call a physician immediately.

Skin contact: Rinse immediately with plenty of water and seek medical advice.

Ingestion: Do not induce vomiting without medical advice.

Eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

5. FIRE-FIGHTING MEASURES
6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Use personal protective equipment.
- **Environmental precautions:** Prevent product from entering drains.
- **Methods for cleaning up:** Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

- **Storage:** +4°C
- **Handling:** Use only in area provided with appropriate exhaust ventilation.
- **Safe handling advice:** Wear personal protective equipment.
- **Incompatible products:** Oxidising and spontaneously flammable products

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- **Engineering measures:** Ensure adequate ventilation.
- **Respiratory protection:** Breathing apparatus needed only when aerosol, vapor or dust is formed.
- **Skin and body protection:** Usual safety precautions while handling the product will provide adequate protection against this potential effect.
- **Eye protection:** Safety glasses with side-shields
- **Hand protection:** Gloves

9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state:** Liquid
- **Formula:** Not applicable
- **Melting point/range:** No data available at this time.
- **Boiling point/range:** No data available at this time.
- **Density:** No data available
- **Vapor pressure:** No data available
- **Evaporation rate:** No data available
- **Vapor density:** No data available
- **Solubility (in water):** No data available
- **Flash point:** Not determined
- **Autoignition temperature:** Not determined

10. STABILITY AND REACTIVITY

- **Stability:** Stable under recommended storage conditions.
- **Polymerization:** None under normal processing.
Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapours such as carbon oxides.

Materials to avoid: Strong oxidising agents

Conditions to avoid: Exposure to air or moisture over prolonged periods.

11. TOXICOLOGICAL INFORMATION

Product Information

Acute toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>RTECS Number:</th>
<th>Selected LD50s and LC50s</th>
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</thead>
<tbody>
<tr>
<td>PHOSPHOGLUCOSE ISOMERASE</td>
<td>Not Available</td>
<td>Not Determined</td>
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</table>

Chronic toxicity: Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.

Local effects: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Specific effects: May include moderate to severe erythema (redness) and moderate edema (raised skin), nausea, vomiting, headache.

Primary irritation: No data is available on the product itself.

Carcinogenic effects: No data is available on the product itself.

Mutagenic effects: No data is available on the product itself.

Reproductive toxicity: No data is available on the product itself.

12. ECOLOGICAL INFORMATION

Mobility: No data available

Bioaccumulation: No data available

Ecotoxicity effects: No data available

Aquatic toxicity: May cause long-term adverse effects in the aquatic environment.

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. DOT - Appendix B - Marine Pollutant</th>
<th>U.S. DOT - Appendix B - Severe Marine Pollutants</th>
<th>United Kingdom - The Red List:</th>
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</thead>
<tbody>
<tr>
<td>PHOSPHOGLUCOSE ISOMERASE</td>
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Components | Germany VCI (WGK) | World Health Organization (WHO) - Drinking Water | Ecotoxicity - Fish Species Data |
<table>
<thead>
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Components | Ecotoxicity - Freshwater Algae Data | Ecotoxicity - Microtox Data | Ecotoxicity - Water Flea Data |
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Components | EPA - ATSDR Priority List | EPA - HPV Challenge Program Chemical List | California - Priority Toxic Pollutants |
<table>
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</table>

Components | California - Priority Toxic Pollutants | California - Priority Toxic Pollutants |
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13. DISPOSAL CONSIDERATIONS
Waste from residues / unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

Contaminated packaging: Do not re-use empty containers

### 14. TRANSPORT INFORMATION

**UN/Id No:** Not a dangerous good.

**ADR/RID**
- **Proper shipping name:** Not Regulated

**IMDG/IMO**
- **Proper shipping name:** Not Regulated

**ICAO/IATA**
- **Proper shipping name:** Not Regulated

### 15. REGULATORY INFORMATION

**Indication of Danger:**
No declaration according to 67/548/EWG

<table>
<thead>
<tr>
<th>Components</th>
<th>EU EINECS List - Section</th>
<th>Germany TA-Luft List - Section</th>
<th>Germany VCI (WGK)</th>
<th>Switzerland Giftliste:</th>
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**Classification according to VbF:**

### 16. OTHER INFORMATION

**Prepared by:** Health & Safety

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End of Safety Data Sheet