

## MSDS HL-ExoI

### 1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

#### Identification of Substance

Denomination: HL-ExoI  
Code: 70100-xxx

#### Identification of the company

Name: ArcticZymes AS  
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### 2. HAZARDS IDENTIFICATION

GHS classification: This product is not classified as hazardous according to OSHA Hazard communication standard 29 CFR 1910.1200 or Regulation (EC) No 1272/2008.  
GHS label elements: N/A  
Other hazards: N/A

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Aqueous solution, consisting of the following component above the cut-off level:

Chemical name on component: Glycerol, CAS# 56-81-5, concentration 50% (v/v).

Other components: Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the GHS regulations.

### 4. FIRST AID MEASURES

Inhalation: If breathing becomes difficult, remove victim to fresh air. Seek medical assistance immediately.  
Ingestion: No adverse effects are reasonably anticipated. However, if any symptoms occur keep victim warm and calm. Get medical attention immediately.  
Skin contact: Avoid skin contact. If skin contact occurs, wash contaminated skin with soap and water and remove contaminated clothing. Get medical attention if the skin becomes irritated.  
Eye contact: Flush contaminated eye(s) with large volumes of water for at least 15 minutes.

### 5. FIRE-FIGHTING MEASURES

Extinguishing media: Use fire extinguishing media appropriate for site conditions.  
Special protective equipment: None necessary.  
Unusual fire and explosion hazards: None.

### 6. ACCIDENTAL RELEASE MEASURES

Personal safety precautions: None.  
Environmental precautions: None.  
Methods and material for containment and cleaning up: Dilute with plenty water. Use an absorbent material to contain/pick up spilled solution. Place all contaminated disposables into a suitable container, seal, label and hold for disposal.

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## 7. HANDLING AND STORAGE

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Handling: Avoid contact with eyes and skin.  
Storage: Store between -20°C and -30°C.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

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Component with limit values for exposure: **51-81-5, Glycerol:**  
*PEL:* 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (respirable fraction);  
*TLV:* 10 ppm (mist).

Ventilation data: Supplemental ventilation is not required for the use of this product.  
Respiratory protection: Respiratory protection is not required.  
Protective gloves: Rubber or chemical resistant gloves should be worn.  
Other protective equipment: Safety glasses with side shields are advised. Eye wash stations and deluge showers should also be available and a lab coat should be worn.

Other engineering controls: None necessary.  
Work practices: Good laboratory technique should be used when handling this product. Observe appropriate chemical hygiene. Avoid contact with skin or eyes. Do not place in mouth.

Hygiene practices: Do not eat, drink or smoke while working with product. Upon completion of work activities involving this product, wash hands thoroughly with soap and water.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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For all components unless otherwise indicated:

Appearance: Viscous, clear, colourless and odourless liquid.  
Relative vapour density: Not determined.  
Flash point: N/A  
Auto ignition: None.  
Decomposition temperature: Not determined.  
Explosion hazard: None.  
Specific gravity: 1,14 g/cm<sup>3</sup>.  
Solubility in water: Soluble in water.  
Vapour pressure: Not determined.  
Evaporation rate: Not determined.  
Freezing/Melting point: Not determined.  
Boiling point: Not determined.

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## 10. STABILITY AND REACTIVITY

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Incompatible materials: None known.  
Possible hazardous reactions: None known.  
Conditions to avoid: None known.  
Chemical stability: The product is stable under recommended handling and storage conditions (excess heat, flame or pressure).

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## 11. TOXICOLOGICAL INFORMATION

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Likely routes of exposure: Skin or eye contact.  
Acute toxicity: None.  
Skin contact: Prolonged skin contact may cause irritation.  
Eye contact: May cause mild irritation.  
Sensitization: N/A  
Reproductive effects: N/A  
Target organ effects: N/A  
Carcinogenicity: None.

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## 12. ECOLOGICAL INFORMATION

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Environmental fate/stability: Components are found in nature and are fully biodegradable.  
Effects on plants or animals: N/A  
Effect on aquatic life: N/A

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## 13. DISPOSAL CONSIDERATIONS

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Waste disposal method: Not classified as dangerous waste. Smaller quantities may be disposed of with household waste. Larger quantities: consult local waste disposal regulations.

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## 14. TRANSPORT INFORMATION

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Is this material hazardous? No.  
Proper shipping name: N/A  
UN Identification number: N/A  
Packing group: N/A  
ADR/RID class: Non-hazardous for road transport.  
IMDG class: Non-hazardous for sea transport.  
IATA class: Non-hazardous for air transport.

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## 15. REGULATORY INFORMATION

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Non-hazardous, no regulatory information applicable.  
No R- or S- sentences applicable.

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## 16. OTHER INFORMATION

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Product must be stored, handled and used according to good manufacturing practise.  
The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ArcticZymes AS shall not be held liable for any damage resulting from handling or contact with the above product.