Material Safety Data Sheet
According to Regulations:
(EC) No 1907/2006
OSHA 29 CFR 1910.1200

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

Product name: LONG® R3 IGF-I, Freeze-dried product (FD)

Description: Freeze-dried preparation of a recombinant analog of human Insulin-like Growth Factor-I

CAS number: 143045-27-6

Use of the substance/preparation: Laboratory chemical. Manufacture of substances.

Company/Undertaking Identification: Repligen Sweden AB
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SE-220 09 Lund
Sweden
+ 46 (0)46 280 17 00

Emergency Telephone Number: Europe: + 46 (0)707 54 98 23
USA: + 1-800-622-2259

2. HAZARDS IDENTIFICATION

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008 or OSHA 29 CFR 1910.1200

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analog of human insulin-like growth factor IGF-I</td>
<td>143045-27-6</td>
<td>85-95</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: If dust is inhaled, remove from contaminated area. Encourage patient to blow nose to ensure clear breathing passage. If irritation or discomfort persists seek medical attention.
Skin contact  
In case of contact with skin, wash the affected area with soap and water. Should irritation occur, contact a physician.

Eye contact  
In case of contact with eyes, flush thoroughly with water and contact a physician.

Ingestion  
In case of accidental swallowing, rinse the mouth with fresh water provided the person is conscious. Contact a physician.

5. FIRE-FIGHTING MEASURES

Protection against Fire and Explosions  
No special requirements

Suitable extinguishing media  
Water spray, dry chemical powder or appropriate foam. Wear self-contained breathing apparatus and protective clothing. Avoid contact with skin or eyes.

Unsuitable extinguishing media  
None

Hazardous combustion products  
None

6. ACCIDENTAL RELEASE MEASURES

Personal precautions  
For personal protection see section 8

Methods for cleaning up  
Carefully sweep up powder, place in a closed container and hold for waste disposal. Avoid raising dust. Wash area thoroughly after clean-up is complete.

7. HANDLING AND STORAGE

Handling  
Avoid generating and breathing dust. Limit all unnecessary personal contact. Standard laboratory practices recommended.

Storage  
Store at 2-8°C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye protection  
Safety glasses or goggles required.

Hand Protection  
Wear general protective gloves, e.g. light weight rubber gloves.

General hygiene considerations  
Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance  
White, odorless crystalline powder

Solubility  
Partly soluble in water.
### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No data available.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>This material is stable under normal conditions of use</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No known</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>No known</td>
</tr>
<tr>
<td>Hazardous Decomposition</td>
<td>No known hazardous decomposition products</td>
</tr>
</tbody>
</table>

### 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Toxicity Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>No known significant effect</td>
</tr>
<tr>
<td>Irritation</td>
<td>May be irritating to skin and eye</td>
</tr>
<tr>
<td>Sensitization</td>
<td>No known significant effect</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No known significant effect</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>No known significant effect</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>No known significant effect</td>
</tr>
</tbody>
</table>

### 12. ECOLOGICAL INFORMATION

- **Ecotoxicity**: The substance is readily biodegradable. EC₅₀ (Daphnia magna) > 100 mg/liter/48 h

### 13. DISPOSAL CONSIDERATIONS

- **Waste Disposal Method**: All waste must be handled in accordance with local, state and federal regulations.

### 14. TRANSPORT INFORMATION

- **Transport Regulations**: The preparation is not subject to current regulations for transport of hazardous materials according to IATA, IMDG, DOT or ADR/RID/ADN

### 15. REGULATORY INFORMATION

The preparation is not classified as hazardous according to OSHA/SARA/CWA/CAA. The preparation is not classified as hazardous according to (EC) No. 1272/2008

### 16. OTHER INFORMATION

**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification.