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

Product name
LONG®R3IGF-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.
THIS PRODUCT IS NOT INTENDED FOR HUMAN OR THERAPEUTIC USE.

Company/Undertaking Identification
Repligen Sweden AB
S:t Lars väg 47
P.O. Box 965
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>% (w/w)</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>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>5-15</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>&lt; 1</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

Reactivity  No data available.
Chemical stability  This material is stable under normal conditions of use
Conditions to avoid  No known
Incompatible materials  No known
Hazardous Decomposition  No known hazardous decomposition products

11. TOXICOLOGICAL INFORMATION

Acute toxicity  No known significant effect.
Irritation  May be irritating to skin and eye
Sensitization  No known significant effect
Carcinogenicity  No known significant effect
Mutagenicity  No known significant effect
Teratogenicity  No known significant effect

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.