SAFETY DATA SHEET

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

1.1. Product identifiers

Product name: Insulin human rec.
Product number: P-2701000, P-2701001, P-2701002, P-2750000, P07-04200

Brand: PAN Biotech

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Manufacture of substances

1.3. Details of the supplier of the safety data sheet

Company: PAN Biotech GmbH
Am Gewerbepark 6
94501 Aidenbach
GERMANY

Telephone: +49-(0)8543-6016-30
Fax: +49-(0)8543-6016-49
E-mail: info@pan-biotech.de

1.4. Emergency telephone number

Emergency phone: +49-(0)8543-6016-30 or +49 151 51557123

2. HAZARDS INDENTIFICATION

2.1. Classification of the substance or mixture

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

2.2. Label Elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3. Other hazards

none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixtures

Synonyms: rh-Insulin
Formula: $C_{257}H_{383}N_{65}O_{77}S_6$
CAS-No.: 11061-68-0
EC-No.: 234-279-7
% by Weight: 100

No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

4.1. Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If breathing becomes difficult, call a physician. If not breathing, give artificial respiration.

In case of skin contact

In case of contact, immediately wash skin with soap and copious amounts of water.

In case of eye contact

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician if symptoms persist.

If swallowed

If swallowed, wash out mouth with water provided person is conscious. Call a physician if symptoms persist.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

No information available.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Carbon oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.

6.2. Environmental precautions

Do not let product enter drains

6.3. Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: -20 °C

7.3. Specific end use(s)

No further information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace control parameters: not required

8.2. Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Use impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance Form:	solid
Odour	no data available
Odour Threshold	no data available
pH	no data available
Melting point/freezing point	no data available
Initial boiling point and boiling range	no data available
Flammability	no data available
Upper/lower flammability or explosive limits	no data available
Flash point	no data available

Evaporation rate	no data available
Vapour pressure	no data available
Vapour density	no data available
Relative density	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available

10. STABILITY AND REACTIVITY

10.1. Reactivity
No data available
10.2. Chemical stability
Stable under recommended storage conditions
10.3. Possibility of hazardous reactions
No data available
10.4. Conditions to avoid
No data available
10.5. Incompatible materials
Strong oxidizing agents
10.6. Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1. Information of toxicological effects

Acute toxicity	no data available
Skin corrosion/irritation	May cause skin irritation.
Serious eye damage/eye irritation	May cause eye irritation.
Inhalation:	Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion:	May be harmful if swallowed.
Respiratory or skin sensitization	no data available
Germ cell mutagenicity	no data available

Carcinogenicity
IARC:
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity	no data available
Specific target organ toxicity - single exposure	no data available
Specific target organ toxicity - repeated exposure	no data available
Aspiration hazard	no data available

Additional Information

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RTECS: Not available
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1. Toxicity
No data available
12.2. Persistence and degradability
No data available
12.3. Bioaccumulative potential
No data available
12.4. Mobility in soil
No data available
12.5. Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
12.6. Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1. UN number
ADR/RID: - IMDG: - IATA: -
14.2. UN proper shipping name
ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods
14.3. Transport hazard class(es)
ADR/RID: - IMDG: - IATA: -
14.4. Packaging group
ADR/RID: - IMDG: - IATA: -
14.5. Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no
14.6. Special precautions for user No data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
No data available

15.2. Chemical Safety Assessment

No data available

16. OTHER INFORMATION

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. PAN Biotech GmbH shall not be held liable for any damage resulting from handling or from contact with the above product. See www.pan-biotech.com or reverse side of invoice or packing slip for additional terms and conditions of sale.