



# INSULIN-LIKE GROWTH FACTOR MATERIAL SAFETY DATA SHEET

## SECTION 1: Identification of mixture and of company Identification

### 1.1. Product identifier

|              |                                      |
|--------------|--------------------------------------|
| Product name | : Insulin-like Growth Factor (IGF-1) |
| Product form | : Freeze-dried powder                |
| LOT number   | :20250819-IGF                        |

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

#### 1.2.1. Relevant identified uses

|                          |                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------|
| Function or use category | : For research use, and as an ingredient in biomanufacturing and cellular agriculture. |
|--------------------------|----------------------------------------------------------------------------------------|

#### 1.2.2. Uses advised against

|                     |                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------|
| Restrictions on use | : Not suitable for diagnostic use, clinical or veterinary applications, or direct human consumption. |
|---------------------|------------------------------------------------------------------------------------------------------|

### 1.3 Details of the supplier/ manufacturer

|                |                                                                                                              |
|----------------|--------------------------------------------------------------------------------------------------------------|
| Company name   | Immobazyme (Pty) Ltd<br>The Woodmill,<br>Shop 8, Block C<br>Devonvallei Road<br>Stellenbosch<br>South Africa |
| Contact person | Ethan Hunter, COO<br>+27 82 425 0058<br>ethan@immobazyme.com                                                 |

### 1.4 Emergency telephone number

+27 112 (South Africa 24/7)

## SECTION 2: Hazard(s) Identification

### 2.1. Classification of the substance or mixture

According to the Globally Harmonized System (GHS) and Regulation (EC) No. 1272/2008 [CLP], this product is not classified as a hazardous substance or mixture.

### 2.2. Label elements

**Hazard pictograms** : None

**Signal word** : None

**Hazardous statement**

H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Precautionary statement**

**Prevention**

P261 : Avoid breathing dust/fume/gas/mist/vapours/spray

P264 : Wash hands thoroughly after handling

P284 : [In case of inadequate ventilation] wear respiratory protection

**Response**

P304+P340 : IF INHALED: Remove person to fresh air for breathing

P342+P311 : If experiencing respiratory symptoms: Call a POISON CENTRE/doctor.

**Disposal**

P501 : Dispose of contents/ container in accordance with related laws and local/ regional regulations

**Supplemental hazard information** : Not applicable

### 2.3. Other hazards

The substance does not meet the criteria for PBT (Persistent, Bioaccumulative and Toxic) or vPvB (very Persistent and very Bioaccumulative) according to Annex XIII of REACH.

No other hazards identified.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

|                                                                                                                                                                    |                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <b>Substance name</b>                                                                                                                                              | : Recombinant Human Insulin-like Growth Factor 1               |
| Synonyms                                                                                                                                                           | : IGF-1, Insulin-like Growth Factor 1                          |
| <b>CAS number</b>                                                                                                                                                  | : 67763-96-6                                                   |
| <b>EC number</b>                                                                                                                                                   | : Not assigned                                                 |
| <b>Molecular weight</b>                                                                                                                                            | : ~29 kDa                                                      |
| <b>Purity</b>                                                                                                                                                      | : ≥ 90% purity (recombinant protein, lyophilized or in buffer) |
| <b>REACH registration number</b>                                                                                                                                   | : Not applicable (biological protein, exempt)                  |
| The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution. |                                                                |

### 3.2. Mixtures

Not applicable

## SECTION 4: Composition/information on ingredients

### 4.1. Description of first aid measures

|                                       |                                                                                                                                                         |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures general            | : Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.                                      |
| First-aid measures after inhalation   | : Remove to fresh air. Seek medical attention if breathing difficulties occur.                                                                          |
| First-aid measures after skin contact | : Wash with soap and water. Remove contaminated clothing.                                                                                               |
| First-aid measures after eye contact  | : Remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues. |
| First-aid measures after ingestion    | : Rinse mouth. If large amounts ingested and discomfort occurs, seek medical attention.                                                                 |
| Notes to physician                    | : Treat symptomatically.                                                                                                                                |

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

*Symptoms/effects* : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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

None

### SECTION 5: Firefighting measures

#### SECTION 5.1. Extinguishing media

*Suitable extinguishing media* : Water spray, carbon dioxide (CO<sub>2</sub>), foam, dry chemicals.

*Unsuitable extinguishing media* : No information available

#### 5.2. Special hazards arising from the substance or mixture

No information available

#### 5.3. Advice for firefighters

Standard procedure for chemical fires

### SECTION 6: Accidental Release Measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Personal precautions : Ensure adequate ventilation. Use personal protection equipment.

##### 6.1.2 For emergency responders

Protective equipment : Use personal protection recommended in Section 8.

Emergency procedures : Keep unnecessary personnel away. Evacuate area.

#### 6.2. Environmental precautions

No special environmental precautions required.

#### 6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material.

#### 6.4. Reference to other sections

See Section 8 for more information.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

7.1.1 Precautions for safe handling : Use personal protective equipment as required. No special handling advice is necessary

7.1.2 Hygiene measures : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

### 7.2 Conditions for safe storage, including any incompatibilities

**Store in a tightly closed container in a clean, dry, and well-ventilated area.**

Conditions for safe storage : The lyophilised vial can be stored at  $-20^{\circ}\text{C}$  for 12 months.  
: The reconstituted protein aliquots can be stored at  $-20^{\circ}\text{C}$  for 6 months.  
: Once resuspended use within 1 week (storage at  $4^{\circ}\text{C}$ ).

Protect from : Moisture (may degrade or clump protein)  
: Light (sensitive to photodegradation)  
: Excessive heat (loss of biological activity above  $37^{\circ}\text{C}$ )

Incompatible materials : strong oxidising agents and strong acids or bases,

Ensure secondary containment to avoid accidental release in freezers/refrigerators shared with other reagents.

### 7.3. Specific end use(s)

Suitable for research use, and as an ingredient in biomanufacturing and cellular agriculture. Not suitable for diagnostic use, clinical or veterinary applications, or direct human consumption.

SECTION 8: Exposure controls/personal protection

| 8.1. Control parameters |                                                                  |
|-------------------------|------------------------------------------------------------------|
| Exposure limits         | : Contains no substances with occupational exposure limit values |
| Engineering measures    | : Ensure adequate ventilation, especially in confined areas      |

| 8.2. Expose Controls                           |                                                                                                                                                                            |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal protection equipment                  | : No special protective equipment required.                                                                                                                                |
| Eye and face protection                        | : No special protective equipment required.                                                                                                                                |
| Respiratory protection                         | : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| General hygiene considerations                 | : Handle in accordance with good industrial hygiene and safety practice.                                                                                                   |
| Environmental exposure controls                |                                                                                                                                                                            |
| No special environmental precautions required. |                                                                                                                                                                            |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                                 |                    |
|---------------------------------|--------------------|
| Colour                          | White              |
| Appearance                      | Lyophilised Powder |
| Odour                           | None               |
| Stability                       | Not applicable     |
| Melting point                   | Not applicable     |
| Freezing point                  | Not applicable     |
| Boiling point                   | Not applicable     |
| Flammability                    | Not applicable     |
| Explosive properties            | Not applicable     |
| Oxidising properties            | Not applicable     |
| Explosive limits                | Not applicable     |
| Lower explosive limit (LEL)     | Not applicable     |
| Upper explosive limit (UEL)     | Not applicable     |
| Flash point                     | Not applicable     |
| Auto-ignition temperature       | Not applicable     |
| Decomposition temperature       | Not applicable     |
| Ignition temperature            | Not applicable     |
| pH                              | ~7.4               |
| pH solution                     | Not applicable     |
| Viscosity, kinematic            | Not applicable     |
| Viscosity, dynamic              | Not applicable     |
| Solubility                      | Not applicable     |
| Log Kow                         | Not available      |
| Vapour pressure                 | Not applicable     |
| Vapour pressure at 50°C         | Not applicable     |
| Density                         | Not applicable     |
| Relative density                | Not applicable     |
| Relative vapour density at 20°C | Not applicable     |
| Particle size                   | Not applicable     |
| Particle size distribution      | Not applicable     |
| Particle shape                  | Not applicable     |
| Particle aspect ratio           | Not applicable     |
| Particle aggregation state      | Not applicable     |
| Particle agglomeration state    | Not applicable     |
| Particle specific surface area  | Not applicable     |
| Particle dustiness              | Not applicable     |

## 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

No additional information available.

### 9.2.2. Other safety characteristics

No information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal handling condition.

### 10.2. Chemical stability

Stable under normal handling conditions.

### 10.3. Possibility of hazardous reactions

No hazardous reaction expected under normal handling

### 10.4. Conditions to avoid

Avoid acids and oxidizing substances

### 10.5. Incompatible materials

No dangerous reaction known under conditions of normal use

### 10.6. Hazardous decomposition products

No data available



## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Principle routes of exposure

#### Potential Health Effects

|                                                            |                                                   |
|------------------------------------------------------------|---------------------------------------------------|
| <i>Eyes</i>                                                | : May cause eye irritation. No data available     |
| <i>Skin</i>                                                | : May cause skin irritation. No data available    |
| <i>Inhalation</i>                                          | : May be harmful by inhalation. No data available |
| <i>Digestion</i>                                           | : May be harmful if swallowed. No data available  |
| <i>Germ cell mutagenicity</i>                              | : No data available                               |
| <i>Carcinogenicity</i>                                     | : No data available                               |
| <i>Reproductive toxicity</i>                               | : No data available                               |
| <i>Aspiration hazard</i>                                   | : No data available                               |
| <i>Target organ effects (single and repeated exposure)</i> | : No data available                               |

### 11.2. Information on other hazards

|                                 |                                                                                                  |
|---------------------------------|--------------------------------------------------------------------------------------------------|
| Endocrine disrupting properties | : All substances are not listed in the candidate list as having endocrine disrupting properties. |
| Other adverse effects           | : No information available                                                                       |

## SECTION 12: Ecological information

### 12.1. Ecological information

|                               |                                                                                                                    |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Ecotoxicity                   | : Contains no substances known to be hazardous to the environment or not degradable in wastewater treatment plants |
| Persistence and degradability | : No information                                                                                                   |
| Bioaccumulative potential     | : No information                                                                                                   |
| Mobility in soil              | : No information                                                                                                   |
| Other adverse effects         | : No information                                                                                                   |

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|                                            |                                                                                                                                                                                                              |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste treatment methods                    | : Dispose of contents/container in accordance with local/regional/national/international regulations. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.                   |
| Product/Packaging disposal recommendations | : Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |
| Other information                          | : Disposal must be done according to official regulations.                                                                                                                                                   |
| European List of Waste (LoW) code          | : The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.                                                                                             |

## SECTION 14: Transport information

14.1. UN number or ID number  
Not regulated in the meaning of transport regulations

14.2. UN proper shipping name  
None

14.3. Transport hazard class(es)  
None

14.4. Packing group  
None

14.5. Environmental hazards  
None

14.6. Environmental hazards  
When transporting, avoid direct sunlight. Confirm no leakage to containers. When loading, prevent containers from falling, dropping off or damaging. Take preventive measures of collapse.

14.7. Special precautions for user  
Not applicable

## SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/ legislation specific for the substance or mixture

No information available

15.2. Chemical safety assessment

Not conducted

## SECTION 16: Other Information

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### **DISCLAIMER**

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