

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

**TGF BETA 3**

Version 4.0

Revision Date 26.04.2024

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Product name : TGF BETA 3  
Material number : PT-4124

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

Use of the Substance/Mixture : For research use only.  
Recommended restrictions on use : NOT FOR USE IN GMP MANUFACTURING, NOR HUMAN OR ANIMAL IN VIVO OR DIAGNOSTIC USE.

**1.3 Details of the supplier of the safety data sheet**

Company : **Lonza Ltd**  
Muenchensteinerstrasse 38  
CH-4002 Basel, Switzerland  
Business Telephone: +41 61 316 81 11

**Lonza Verviers Sprl**  
Parc Industriel de Petit-Rechain  
BE-4800 Verviers, Belgium  
Business Telephone: +32 8732 1611

**Lonza Cologne GmbH**  
Nattermannallee 1  
DE-50829 Köln, Germany  
Business Telephone: + 49 221 99 1990

E-mail address / Responsible/issuing person : sds@lonza.com

**1.4 Emergency telephone number**

Emergency telephone number : Lonza Ltd, CH-4002 Basel, Switzerland  
Telephone: +41 61 313 94 94 (24h)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

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

**2.2 Label elements****Labelling (REGULATION (EC) No 1272/2008)**

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

**Additional Labelling**

The following percentage of the mixture consists of ingredient(s) with unknown acute oral toxicity: 1,9608 %

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The following percentage of the mixture consists of ingredient(s) with unknown acute dermal toxicity: 1,9608 %

The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 1,9608 %

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 1,9608 %

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

Remarks : No hazardous ingredients

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- |                         |   |   |
|-------------------------|---|---|
| If inhaled              | : | Move to fresh air.<br>If unconscious, place in recovery position and seek medical advice.<br>If symptoms persist, call a physician.   |
| In case of skin contact | : | Wash with water and soap as a precaution.<br>If on clothes, remove clothes.<br>In the case of skin irritation or allergic reactions see a physician.                                |
| In case of eye contact  | : | Flush eyes with water as a precaution.<br>Remove contact lenses.<br>Keep eye wide open while rinsing.<br>Protect unharmed eye.<br>If eye irritation persists, consult a specialist. |
| If swallowed            | : | Clean mouth with water and drink afterwards plenty of water.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.                    |

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

Symptoms : No information available.

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

Treatment : Treat symptomatically.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Dry chemical

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during firefighting : Heating or fire can release toxic gas.

Hazardous combustion products : No hazardous combustion products are known

**5.3 Advice for firefighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

Further information : Use a water spray to cool fully closed containers.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment.

**6.2 Environmental precautions**

Environmental precautions : Try to prevent the material from entering drains or water courses.

**6.3 Methods and material for containment and cleaning up**

Methods for cleaning up : Pick up and arrange disposal without creating dust.  
Shovel into suitable container for disposal.

**6.4 Reference to other sections**

For personal protection see section 8.

For disposal considerations see section 13.

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Advice on safe handling : No special precautions required.  
For personal protection see section 8.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

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

Requirements for storage areas and containers	:	Keep container tightly closed. Keep in a well-ventilated place. To maintain product quality, do not store in heat or direct sunlight.
Further information on storage conditions	:	Avoid moisture.
Advice on common storage	:	No special restrictions on storage with other products.
Further information on storage stability	:	No decomposition if stored and applied as directed.

### 7.3 Specific end use(s)

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Engineering measures

Use only in area provided with appropriate exhaust ventilation.

#### Personal protective equipment

Eye protection	:	Safety glasses
Hand protection	:	
Remarks	:	Wear protective gloves. Break through time : > 480 min
Skin and body protection	:	Choose body protection according to the amount and concentration of the dangerous substance at the work place. Lightweight protective clothing
Respiratory protection	:	In the case of dust or aerosol formation use respirator with an approved filter.
Filter type	:	Particulate type (P1/N95) (P1-P)

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	:	solid
Appearance	:	powder
Colour	:	No data available
Odour	:	No data available
Melting point/freezing point	:	No data available

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Boiling point/boiling range	:	No data available
Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	No data available
Viscosity	:	No data available
Solubility(ies)	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Density	:	No data available
Relative vapour density	:	No data available
Particle characteristics	:	No data available

**9.2 Other information**

No data available

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**SECTION 10: Stability and reactivity****10.1 Reactivity**

No decomposition if stored and applied as directed.

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : Stable under recommended storage conditions.  
No hazards to be specially mentioned.

**10.4 Conditions to avoid**

Conditions to avoid : Heat

**10.5 Incompatible materials**

Materials to avoid : Oxidizing agents  
Strong acids and strong bases

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### 10.6 Hazardous decomposition products

No decomposition if used as directed.

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## SECTION 11: Toxicological information

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

#### Aspiration toxicity

No aspiration toxicity classification

### 11.2 Information on other hazards

#### Endocrine disrupting properties

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### Further information

Remarks: No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Further information

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment:  
1,9608 %

### 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

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

Additional ecological information : No data available

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

- Product : Dispose of contents/container in accordance with local regulation.  
Contact waste disposal services.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

### SECTION 14: Transport information

**IATA** Not dangerous goods

- 14.1 UN number : Not applicable  
 14.2 Proper shipping name : Not applicable  
 14.3 Transport hazard class(es) : Not applicable  
 14.4 Packing group : Not applicable  
 14.5 Environmental hazards : no

**IMDG** Not dangerous goods

- 14.1 UN number : Not applicable  
 14.2 Proper shipping name : Not applicable  
 14.3 Transport hazard class(es) : Not applicable  
 14.4 Packing group : Not applicable  
 14.5 Environmental hazards : Marine pollutant: no

**ADR** Not dangerous goods

- 14.1 UN number : Not applicable  
 14.2 Proper shipping name : Not applicable  
 14.3 Transport hazard class(es) : Not applicable  
 14.4 Packing group : Not applicable  
 14.5 Environmental hazards : no

**RID** Not dangerous goods

- 14.1 UN number : Not applicable  
 14.2 Proper shipping name : Not applicable  
 14.3 Transport hazard class(es) : Not applicable  
 14.4 Packing group : Not applicable  
 14.5 Environmental hazards : no

**DOT** : Not dangerous goods

- 14.1 UN number : Not applicable  
 14.2 Proper shipping name : Not applicable  
 14.3 Transport hazard class(es) : Not applicable  
 14.4 Packing group : Not applicable

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**TDG** : Not dangerous goods

**14.1 UN number** : Not applicable

**14.2 Proper shipping name** : Not applicable

**14.3 Transport hazard class(es)** : Not applicable

**14.4 Packing group** : Not applicable

**14.5 Environmental hazards** : no

**14.6 Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**14.7 Maritime transport in bulk according to IMO instruments**

Not applicable for product as supplied.

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.  
Not applicable

Water hazard class (Germany) : WGK 2 obviously hazardous to water

**15.2 Chemical safety assessment**



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**SECTION 16: Other information****Full text of other abbreviations**

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE - Acute Toxicity Estimate; AwSV - Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen / Ordinance on facilities for handling substances that are hazardous to water; BPR – Biocidal Product Regulation; bw - Body weight; CAS - Chemical Abstract Service; CLP - Classification Labelling Packaging Regulation, Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL-Derived No Effect Level; DOT - Department of Transportation; EC – European Community; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EmS (Emergency Response Procedures for Ships Carrying Dangerous Goods); EN – European Standard; ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; EU OEL - European Occupational Exposure Limit; GHS -Globally Harmonized System of Classification and Labelling of Chemicals; GLP - Good Laboratory Practice; GV – Danish Exposure Limits for Substances and Materials; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LOFT - Danish Threshold Limit Value; MAK - German Threshold Limit Value; MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NIOSH/Guide – National Institute of Safety and Health Guidebook; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NTP - National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT - Persistent, Bioaccumulative and Toxic substance; PEL - Permissible Exposure Limit; PNEC - Predicted no Effect Concentration; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; REL - Recommended Exposure Limit; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; STEL - Short-Term Exposure Limit; TDG - Transportation of Dangerous Goods; TGG – Dutch Threshold Limit Value; TGV – Swedish OEL; TLV Threshold Limit Value; TLV-C - Threshold Limit Value Ceiling; TWA -Time Weighted Average; UDS - Unscheduled DNA Synthesis; UN - United Nations; VLE - Valeurs limites d'exposition professionnelle aux agents chimiques en France; VME - Valeur (Limite) Moyenne d'Exposition; VOC - Volatile Organic Compound[s]; WEEL - Workplace Environmental Exposure Level; % w/w Percent weight by weight; %(V) Percent Volume

**Further information**

Other information : This Safety Data Sheet is a generic European Safety Data Sheet and therefore does not contain all specific information for each European country.

Date format : dd.mm.yyyy

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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