

PROTEIN-LMW_x[®] 10

Material safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Chemical name:	PROTEIN HYDROLYSATES, animal
CAS number:	100085-61-8
EC-number:	309-203-1
Article number:	-
Document version:	01.1 - EN
Valid from:	01/09/2022

* = registered trademark of PROTAN AG

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

1.1 Product identifier

Commercial name	PROTEIN-LMW _x 10
Product number	-
Chemical name	Protein hydrolysates, animal
Substance name	Mixture of amino acids and peptides
REACH number	No registration number is available for this substance as the substance or its uses are exempt from registration, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

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

Natural polymer used as a technical protein hydrolyzate. Observe the relevant legal rules for the specific application.

1.3 Details of the supplier of the safety data sheet

Company	Protan AG; Runkelsstrasse 38, LI-9495 Triesen
Telefon	+423 375 15 25
Fax	+423 375 15 26
E-Mail-Address	welcome@protein-products.com

1.4 Emergency telephone number

International HELPLINE (24h)	+49 (0) 30 19240 (German and English language)
„Tox Info“ Suisse	145 (from Switzerland); +41 44 251 66 66 (from Germany)
Protan AG	+423 375 15 25 (working hours only)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CAS number: 100085-61-8; EC-number: 309-203-1

Not hazardous substance according to the German ordinance on hazardous substances (Gefahrstoffverordnung [GefStoffV]) nor the European Regulation (EC) No 1272/2008 (CLP) and subsequent amendments. This product does not require classification according to GHS criteria.

2.2 Label elements

The products is not subject to any labelling obligation according and the regulation (EC) No. 1272/2008 and GefStoffV

Pictogram, signal word code(s)	None
Hazard statement code(s)	Not hazardous
Supplemental hazard statement code(s)	Not applicable
Precautionary statements	None in particular

2.3 Other hazards

No special hazards are known if the regulations and instructions for storage and handling are considered.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

	CAS number:	EC-number (EINECS):	Concentration:	INDEX-number:
Protein Hydrolysate, animal	100085-61-8	309-203-1	> 55%	-
Water	7732-18-5	231-791-2	< 45%	-



PROTEIN-LMW_x[®] 10

Material safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Chemical name:	PROTEIN HYDROLYSATES, animal
CAS number:	100085-61-8
EC-number:	309-203-1
Article number:	-
Document version:	01.1 - EN
Valid from:	01/09/2022

* = registered trademark of PROTAN AG

Main components	Natural polymer (amino acids and peptides) modified by hydrolysis. Water soluble protein hydrolysate.
Other chemical descriptions; synonyms	Enzymatically hydrolysed amino acids and peptides. Liquid and water-soluble protein hydrolysate.
Hazardous impurities	No components are to be disclosed according to applicable regulations.

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

General Information	No danger is to be expected from the normal use of the substance. Nevertheless, we recommend following the instructions below. In case of persistent malaise, consult a doctor after first aid. In the case of medical assistance have the Safety Data Sheet (MSDS) and product label ready.
Following inhalation	Air the area. Move concerned person to a quiet, warm, and well-ventilated area. Keep her/him at rest.
Following skin contact	Remove contaminated clothing. Wash thoroughly with soap and running water. Contaminated clothing must be washed before being reused.
Following eye contact with pure product	Wash eyes thoroughly with clean, fresh water for at least ten minutes. Keep eyelids open. Remove contact lenses. In case of eye irritation consult an ophthalmologist.
Following ingestion	Rinse mouth with plenty of water. Do not induce vomiting. Consult a doctor if ingested in large quantities. Never give anything by mouth to an unconscious person.
Self-protection of the first responder	Follow good working practice. No particular indication.

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

No hazard is to be expected if the product is used as intended and handled appropriately.

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

None.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Appropriate extinguishing media	Coordinate fire-fighting measures to the fire surroundings. Foam fire extinguishers, dry extinguishing powder, carbon dioxide (CO ₂). For small fires, water spray can be used.
Unsuitable extinguishing media	Use water jets only to cool the surfaces of the containers exposed to fire. Avoid using water jets in case of danger of spreading the fire.

5.2 Special hazards arising from the substance or mixture

The product contains combustible organic components. In the event of a fire, toxic gases can be released (nitrogen gases, sulphur dioxide, nitrogen oxides, carbon monoxide, carbon dioxide). Decomposition products can be harmful to health. Avoid any exposure.



PROTEIN-LMW_x[®] 10

Material safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Chemical name:	PROTEIN HYDROLYSATES, animal
CAS number:	100085-61-8
EC-number:	309-203-1
Article number:	-
Document version:	01.1 - EN
Valid from:	01/09/2022

* = registered trademark of PROTAN AG

5.3 Advice for firefighters

General information	Coordinate extinguishing measures considering local and environment circumstances.
Equipment	Use respiratory protection equipment that supplies air from an independent source especially when working in confined and poorly ventilated area and using halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...). Wear fire-fighting protection equipment: auto-respirator (EN 137), suitable protective gloves (EN 659), suitable protective clothing (EN 469) and fire-fighter boots (HO A29 or A30).

5.4. Other information

Contain and collect water used for fire extinguishing and fire residues in accordance with legislation in force. Avoid flushing the water used for fire extinguishing in surface-water/drains. If this occurs, notify to competent authorities.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Non-emergency personnel and emergency responders shall adopt appropriate safety precautions using gloves, goggles, and suitable protective clothing. Precautions against the formation of aerosols must be implemented in accordance with the rules of industrial hygiene and good working practice. If necessary, evacuate the danger area. Provide adequate ventilation. Consider protective measures described in section 7 and 8.

6.2 Environmental precautions

Limit the pouring area. Do not introduce the product and waste into surface water and sewage. If possible, collect the product for re-use and / or discharge into the sewage that feeds a biological wastewater treatment plant.

6.3 Methods and material for containment and cleaning up

Recovery	Contain spillage, pick up with absorbent non-combustible material (eg. sand, earth, diatomaceous earth, vermiculite).
Cleaning	Clean the affected area with water. Collect the water in suitable containers if cleaning water is used in large amounts.
Disposal of collected materials	Store in appropriate, labelled, and sealed containers or bags for reuse or disposal in accordance with local and national regulations.
Other information	The product and the material for containment, may cause slippery surfaces.

6.4 Reference to other sections

Emergency contact information	See section 1
For exposal control	See section 7
For personal protection	See section 8
For disposal considerations	See section 13

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

General information	Read product label carefully before use. The normal safety precautions for handling chemicals should always be observed. Keep precautionary measures against the forming of inhalable aerosols/dust. Do not contaminate water, food or feed by storage or disposal.
---------------------	---



PROTEIN-LMW_x[®] 10

Material safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Chemical name:	PROTEIN HYDROLYSATES, animal
CAS number:	100085-61-8
EC-number:	309-203-1
Article number:	-
Document version:	01.1 - EN
Valid from:	01/09/2022

* = registered trademark of PROTAN AG

Personal protection measures	Use suitable protective gloves, safety glasses and clothing. Handle the product according to industrial hygiene practice. See section 8.
Preventive measures for fire and explosion protection	Based on current knowledge, the handling of the product doesn't present hazards if the normal measures for preventive fire protection of good working practices are applied. Work in clean and ventilated areas. Remove dust deposits.
Measures to prevent aerosol formation	Use and handle the product according to good manufacturing practice.
Good Industrial hygiene recommendations	Do not eat, drink and smoke in work areas. Wash hands after use. Remove clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

The storage area including technical facilities, equipment and the operating procedures must comply with the rules of legislation in force.

Technical measures for storage	Take the necessary measures to avoid accidental discharge of products into drains and waterways in the event of rupture of containers or transfer systems malfunction. Keep in original container closed tightly. Do not store in open or unlabelled containers.
Suitable materials for storage containers	High density polyethylene (HDPE).
Incompatibilities	Strong oxidizing agents.
Storage stability	Recommended storage temperature: 10 °C - 30 °C Product viscosity increases at low temperatures (<10 °C). Do not leave in direct sunlight because of the formation of condensation in the IBC. Store undiluted in clean, sealed containers and in suitable places to maintain unchanged the original characteristics of the product.

7.3 Specific end use(s)

No available data except for the general information given in this section and valid for any use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

The product does not contain any relevant quantities of materials with critical value limits and biological limit values to be monitored. Apply general workplace control parameters and assure adequately ventilated, cool and dry premises for storage and manipulation. No further information apart from section 7.

8.2 Exposure controls

Appropriate engineering control	The use of technical measures must always take precedence over the use of personal protective equipment. Apply recommendations for the handling of chemicals, especially those describing exposure to splashes. Use appropriate personal protective equipment according to the Directive 89/686/EEC.
Personal protective equipment: - Eyes and face protection	Wear protective goggles tested and approved for eye protection (EN 166 Standard).
- Hand protection	Handle with protective PVC, neoprene, nitrile, or equivalent gloves of category II (EN 374 standard). For the appropriate choice, evaluate permeation, degradation in relation to the specific work activity.
- Skin protection	Use work clothes for category II professional use according to good industrial practice (EN 344 standard).



PROTEIN-LMW_x[®] 10

Material safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Chemical name:	PROTEIN HYDROLYSATES, animal
CAS number:	100085-61-8
EC-number:	309-203-1
Article number:	-
Document version:	01.1 - EN
Valid from:	01/09/2022

* = registered trademark of PROTAN AG

- Respiratory protection	If required for particular and specific working situations, wear a mask with filter type P or universal type (1, 2 or 3) according to EN 141 standard.
General safety and Hygiene measures	Handle in accordance with good industrial hygiene practice. Keep personal protective equipment always clean and in good condition. Wash hands before breaks and after work.
Thermal hazards	No hazard to report.
Additional protective measures	Select protective equipment conform to good industrial practice.
Environmental exposure controls	Use according to the Guidelines of Good Working Practice (GxP) to avoid pollution of the environment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance, form	Liquid, light brown colour
Odour	Specific
pH-Value (10% w/w, solution at 25°C):	6,5 ± 0,5
Dry matter	55%
Density (g/cm ³)	1,20 +/- 0,05 kg/l
Solubility in water (20°C in g/l)	Total, opaque suspension
Ammonium Nitrogen (N _{amm})	0,5%
Total Nitrogen (N)	7,0%
Organic Carbon (C _{org})	22%

9.2. Other information

Detailed information available upon request.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reactions expected if the product is stored and handled in accordance with the indications in this document and the applicable regulations.

10.2 Chemical stability

Stable under recommended conditions of storage and use.

10.3 Possibility of hazardous reactions

No dangerous reactions known when stored and handled in accordance with the indications in this document and the applicable regulations.

10.4 Conditions to avoid

Refer to section 7 for "Handling and storage".

10.5 Incompatible materials

In aqueous solutions with strong oxidizing agents such as mineral acids, elemental metals, and organic peroxides exothermic reactions with the release of toxic gases may occur.

10.6 Hazardous decomposition products

No dangerous decomposition products known when stored and handled in accordance with the regulations and this Material Safety Data Sheet. In the event of fire, see section 5.



PROTEIN-LMW_x[®] 10

Material safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Chemical name:	PROTEIN HYDROLYSATES, animal
CAS number:	100085-61-8
EC-number:	309-203-1
Article number:	-
Document version:	01.1 - EN
Valid from:	01/09/2022

* = registered trademark of PROTAN AG

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Akute toxicity	Oral LD50 > 5000 mg/kg (rat)
Irritation	Not irritating to eyes and skin.
Sensitization of the respiratory tract/skin	There is no evidence of a skin sensitizing potential.

The product is not hazardous, not toxic, and not irritant following toxicological tests on protein hydrolysates. Amino acids and peptides are natural origin, omnipresent and essential for life of human beings and therefore harmful effects on health can be excluded.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

The product contains protein and a low percentage of fat. Considering the natural character of the ingredients, negative effects on environment can only follow an uncontrolled release of the product. Low concentrations, properly discharged into biological wastewater treatment plants, do not affect the degradation activity of activated sludge.

12.2 Persistence and degradability

Amino acids and peptides are the main natural components of proteins and are metabolized by living organisms in the environment (bacterial biomass). The biotic degradation produces simple metabolites involved in the biochemical processes of the living cells. According to OECD evaluation, the product is easily biodegradable in water environment.

12.3 Bioaccumulative potential

The degradation of protein hydrolysates in soil and water produces amino acids that are metabolized and reused in protein synthesis. Proteins remain in the environment for a very short time without a tendency to bioaccumulation.

12.4 Mobility in soil

Despite the product is completely biodegradable, significant quantities released to the environment can pollute ground and surface water and may cause temporarily alterations in the natural product dispersion. Handle in accordance with good industrial hygiene and safety practice to prevent the spread of concentrate product and penetration into the soil and surface waters.

12.5 Results of PBT and vPvB assessment

Self-classification according to Annex XIV of Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH): The product does not contain a substance that meets the PBT criteria (persistent/bio-accumulable/toxic) or the vPvB criteria (very persistent/very bio-accumulable).

12.6 Other adverse effects

The product does not contain any materials listed in Regulation (EC) 1005/2009 on substances reducing the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

We recommend clarifying the waste key with a certified disposal company.

Unused product:

"European Waste Catalogue and
Hazardous Waste List" classification
2000/532/EC
2001/118/EC
2001/119/EC
2001/537/EC

Dispose product in accordance with national / regional regulations.
02 00 00 WASTES FROM AGRICULTURE, HORTICULTURE,
AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD
PREPARATION AND PROCESSING
02 01 00 wastes from agriculture, horticulture, aquaculture, forestry,
hunting and fishing / 02 01 02 animal-tissue waste



PROTEIN-LMW_x[®] 10

Material safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Chemical name:	PROTEIN HYDROLYSATES, animal
CAS number:	100085-61-8
EC-number:	309-203-1
Article number:	-
Document version:	01.1 - EN
Valid from:	01/09/2022

* = registered trademark of PROTAN AG

Packaging

Containers should be disposed of in accordance with local and national regulations. Recycle cleaned containers. Do not remove labels until the packaging is thoroughly cleaned.

SECTION 14. TRANSPORT INFORMATION

Land, air, and sea transport

No dangerous goods within the scope of ADR / RID, IMDG / GGVSee, ICAO-TI / IATA-DGR.

Transport in bulk according to Annex II of Marpol 73/78 and the IBC code is not performed.

SECTION 15. REGULATORY INFORMATION

A safety data sheet is legally not required under Article 31 of REACH Regulation because the product PROTEIN-LMW 10 is not dangerous. The provision of information in this document is intended to allow for an appropriate risk assessment and risk management according to Article 32 of REACH Regulation. The REACH Material Safety Data Sheet (MSDS) has established a standard reference, which is why the information is provided in this format. We remind employers of their duty to carry out such an assessment and subsequently to provide an appropriate working environment, to make available to those who are required to use this product all necessary personal protective equipment and to ensure that such equipment is used. Workers who use this product must have received adequate training to good industrial practice.

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

This product is not subject to Community requirements for the protection of health and the environment and neither a hazardous substance or mixture within the meaning of EC Regulation 1272/2008 (CLP) and the German Hazardous Substances Regulation (GefStoffV). Nevertheless, we recommend observing the usual precautions when handling chemicals.

This product is made from animal raw materials. Production, packaging, transport, and use are subject to Regulation (EC) No 1069/2009 for animal by-products and their derivatives which are not intended for human consumption.

This safety data sheet complies with the requirements of Article 31 of EC Regulation 1907/2006 (REACH). The order of the information corresponds to Annex II to this Regulation as amended in 2010 (Regulation 453/2010/EC).

15.2 Chemical safety assessment

No chemical safety assessment has been carried out by the manufacturer. Instructions on how to use the product can be found in sections 7 and 8 of this Material Safety Data Sheet.

SECTION 16. OTHER INFORMATION

Revisions	New version
Relevant legislation for the communication of safety information.	1907/2006/EC (REACH) and subsequent amendments and supplements 1272/2008/EC (CLP) and subsequent amendments 453/2010/EU 830/2015/EU 2009/161/EU Safety Data Sheets provided by suppliers of component substances.
Acronyms and abbreviations	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. CAS: Chemical Abstract Service registry number. CLP: European regulation on classification labelling and packaging of substances and mixtures. EC: European Community ECHA: European Chemicals Agency



PROTEIN-LMW_x® 10

Material safety data sheet

According to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Chemical name:	PROTEIN HYDROLYSATES, animal
CAS number:	100085-61-8
EC-number:	309-203-1
Article number:	-
Document version:	01.1 - EN
Valid from:	01/09/2022

* = registered trademark of PROTAN AG

EEC: European Economic Community
EU: European Union
GefStoffV: German ordinance on Hazardous Substances.
GGVsee: Ordinance on the Transport of Dangerous Goods by Sea.
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
GxP: Best practice quality guidelines and regulations.
IMDG: International code for the maritime transport of dangerous goods in packaged form.
IATA: International Air Transport Association (IATA)
ICAO: International Civil Aviation Organization
IBC: International code for the construction and equipment of ships carrying dangerous chemicals in bulk.
LGK-VCI: Storage classes Assignment according to the "Concept for the storage of chemicals"; German Association of the Chemical Industry.
MARPOL: International Convention for the Prevention of Pollution from Ships
PBT: Persistent, bio accumulative and toxic
REACH: Registration Evaluation Authorization and Restriction of Chemicals
RID: Intergovernmental Organisation for International Carriage by Rail
UN: United Nations
vPvB: Very persistent, very bio accumulative

Legal Notice

This Material Safety Data Sheet (MSDS) is additional to the Technical Data Sheet (TDS) but does not replace it. The MSDS contains guidance on the safe handling, processing, storage, transport, and disposal of the product PROTEIN-LMW_x 10. This product is technical grade, unless otherwise stated or agreed, it is intended exclusively for technical use. Any other use may pose risks and may be subject to specific standards and regulations. This document refers to the original product in the state in which it is delivered and may not be valid for the formulation or combination with other materials or in any process. The user will take sole responsibility for the precautions relating to the use of the product. The information in this MSDS is applicable to the product regarding appropriate safety precautions and is not intended to guarantee any properties. This document is not to be considered a warranty or quality specification. Neither an agreed quality nor the suitability of the product for a specific purpose may be derived from the information in this safety data sheet. It is the responsibility of the recipient of the product to ensure that any ownership rights and existing laws and regulations are respected. The information in this MSDS does not pretend to be all-inclusive and is given to the best of our knowledge at the time of publication. Protan AG assumes no liability regarding the contents of this document and shall not be held liable for any damage resulting from unsafe handling of the product.

Publ. date: September 2022

© Protan AG, 2022

All product names are trademarks of Protan AG Company.

License granted to make unlimited paper copies for internal use only.

Reproduction is authorised provided written notification is given to info@protan.li and the source is fully acknowledged in the form "Source: Protan AG, <http://protan.li/>"

