

PureSilk® fibroin solution

Revision 1.1 (2022-07-01)

1 Product and Company Identification

1.1 Product Identifiers

Trading name/Designation	PureSilk® fibroin solution
Description	Aqueous protein solution with silk fibroin.
REACH number	This product is a mixture. REACH registration numbers refer to section 3.

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

Usage of the substance/mixtures	Biological component, compound of substances/products
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1.3 Details of the supplier of the safety data sheet

Company	Fibrothelium GmbH c/o TRIWO Technopark Aachen Philipsstr. 8 52068 Aachen Germany
Phone	+49 241 475718-70
E-mail	info@fibrothelium.com

1.4 Emergency contacts

Phone	The local emergency numbers are to be used.
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PureSilk® fibroin solution

Revision 1.1 (2022-07-01)

2 Hazards Identification

2.1 Classification of the substance or mixture

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

2.2 Label elements

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

2.3 Other hazards

None.

3 Composition/Information on Ingredients

3.1 Substances

Not applicable.

3.2 Mixtures

In accordance with the relevant legislation, no components need to be reported.

4 First Aid Measures

4.1 Description of first aid measures

If in any doubt or if symptoms are present, seek medical advice. If unconscious, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or if convulsions occur. Change soiled, saturated clothing. Do not leave affected persons unattended.

After inhalation: Remove affected person to fresh air.

In case of skin contact: In case of contact with skin, wash off/shower immediately with plenty of soap and water. Immediately remove all contaminated clothing. In case of skin reaction, consult a doctor.

After eye contact: In case of contact with the eyes, rinse immediately with running water for 10 to 15 minutes with the eyelid held wide open and seek medical advice. Protect the uninjured eye. Remove any existing contact lenses if possible. Continue rinsing.

After swallowing: Immediately rinse mouth and allow plenty of water to be drunk in small sips (dilution effect), consult physician if unwell. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention or special treatment needed

No information available.

4.4 Self-protection of the first aider

First aiders: Pay attention to self-protection!

4.5 Advice for the physician

No information available.

PureSilk® fibroin solution

Revision 1.1 (2022-07-01)

5 Firefighting Measures

5.1 Extinguishing media

The product itself does not burn. Coordinate fire-fighting measures to the surroundings.

5.2 Special hazards arising from the substance or mixture

No information available.

5.3 Advice for firefighters

Special protective equipment for fire fighters:

In case of fire, wear self-contained breathing apparatus.

More information:

Do not allow extinguishing residues to get into canals and waters.

Do not inhale explosion and fire gases.

Use water spray to protect people and to cool containers in the danger area.

In case of fire: evacuate the area.

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapors/mist/gas.

Personal protective equipment, see section 8.

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

For information on disposal, see Section 13.

7 Handling and Storage

7.1 Precautions for safe handling

Information on protective measures can be found in section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dark place. Recommended storage temperature -20 °C.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no further specific end uses are stipulated.

PureSilk® fibroin solution

Revision 1.1 (2022-07-01)

8 Exposure Controls / Personal Protection

8.1 Control parameters

The product does not contain any substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Technical measures and the use of suitable work processes have priority over the use of personal protective equipment. In the case of open handling, devices with local exhaust ventilation are to be used.

Personal protection equipment

Wear suitable protective clothing when working. When handling chemical agents, only chemical protective clothing with a CE mark including a four-digit test number may be worn. Body protection (in addition to normal work clothing) is required to protect against direct skin contact.

Body protection equipment must be selected specifically for the workplace, depending on the concentration and quantity of hazardous substances.

Eye/face protection:



Frame glasses with side protection

DIN-/EN-standards:

DIN EN 166 face protection

Hand protection:



Protective gloves

DIN-/EN-standards:

DIN EN 374

When handling chemical agents, only chemical protective gloves with a CE mark including a four-digit test number may be worn. Recommended glove brands DIN-/EN-standards: EN ISO 374. If gloves are to be reused, clean them before taking them off and keep them well ventilated.

Additional information:

Wash hands before breaks and at the end of work. Avoid contact with eyes and skin. Do not eat, drink or smoke at work. Provide eye showers and clearly mark their location.

Respiratory protection:

Not required, except in case of aerosol formation.

Environmental exposure controls

Do not let product enter drains.

PureSilk® fibroin solution

Revision 1.1 (2022-07-01)

9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Form	Liquid
Colour	Clear/slight yellow
Odour	Barely
Odour threshold	Not determined
pH-value at 20°C	7 ± 1.5
Melting/Freezing point	Not determined
Initial boiling point and boiling range	> 100 °C
Flash point	Not determined
Flammability (solid, gas)	Not applicable
Ignition temperature	Not applicable
Degradation temperature	> 40°C
Auto-ignition temperature	The product is not self-igniting
Explosive properties	The product is not explosive
Lower explosion limit	Not determined
Upper explosion limit	Not determined
Vapor pressure	Not determined
Density at 20°C	Not determined
Relativ density	Not determined
Vapor density	Not determined
Evaporation rate	Not determined
Solubility in / Miscibility with water	Not determined
Partition coefficient n-octanol/water	Not determined
Viscosity, dynamic	No information available

9.2 Other information

No other relevant information available.

PureSilk® fibroin solution

Revision 1.1 (2022-07-01)

10 Stability and Reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used as directed.

10.3 Possibility of hazardous reactions

Violent reactions possible with:

The generally known reactants for water.

10.4 Conditions to avoid

Temperatures above 40 °C to avoid decomposition.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Above 40 °C, carbon monoxide, carbon dioxide and degradation products of unknown types can arise.

11 Toxicological Information

11.1 Information on hazard classes as defined in Regulation (EC) No. 1272/20

Acute toxicity:

No information available.

Acute dermal toxicity:

No information available.

Skin irritation:

No information available.

Eye irritation:

No information available.

Awareness:

No information available.

Germ cell mutagenicity:

No information available.

Carcinogenicity:

No information available.

Reproductive toxicity:

No information available.

Teratogenicity:

No information available.

PureSilk® fibroin solution

Revision 1.1 (2022-07-01)

Specific target organ toxicity – single exposure

No information available.

Specific target organ toxicity – repeated exposure

No information available.

Aspiration hazard

No information available.

11.2 Other informations

Hazardous properties cannot be ruled out, but are unlikely if the product is used properly.

The usual precautionary measures when handling chemicals must be observed.

12 Ecological Information

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

A PBT/vPvB assessment is not available because a chemical safety assessment was not required / not carried out.

12.6 Other adverse effects

No information available.

13 Disposal Considerations

Dispose of residues and non-recyclable solutions to a recognized disposal company.

Dispose of contaminated packaging as unused product.

Find out more about take-back systems for chemicals and packaging at www.Retrologistik.de or use the address to contact us if you have any questions.

Observe waste directive 2008/98/EC.

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Revision 1.1 (2022-07-01)

14 Transport Information

14.1 UN-Number	ADR/RID: - IMDG: - IATA: -
14.2 UN shipping name	ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods
14.3 Class	R/RID: - IMDG: - IATA: -
14.4 Packing group	R/RID: - IMDG: - IATA: -
14.5 Environmental hazards	ADR/RID: no IMDG Marine pollutant: no IATA: no
14.6 Special precautions for the User	Section 6-8

PureSilk® fibroin solution

Revision 1.1 (2022-07-01)

15 Regulatory Information

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

This safety data sheet fulfills the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

16 Other information

Training information

No training is required for working with this substance.

Provide adequate information, instruction and education to users.

The information is based on the present state of our knowledge and is intended to describe the product in terms of the safety precautions to be taken. They do not constitute a guarantee of the properties of the product described.