

Product data sheet

ALUMINIUM COATED BASALT FIBRE

Physical properties	Unit	Value
Density	g/cm ³	2.7
Monofilament diameter	µm	23
Yarn count	Tex (DIN EN 12654)	30
Filaments/Yarn	-	30
Fibre volume ratio	Vol. - %	0.5
Form	-	Side by side
Mechanical properties		
Tensile modulus	GPa (DIN EN ISO 2062) cN/tex	57.3 1825.2
Tensile strength	MPa (DIN EN ISO 2062) cN/tex	480 23.5
Tensile elongation at break	% (DIN EN ISO 2062)	1.2
Thermal properties		
Melting temperature	°C	660
Working temperature	°C	< 650
Working temperature under load	°C	< 400
Other properties		
Electrical resistance	Ω/m (ASTM B 193-87)	18
Sizing	-	Polymer/oil/lubricant

The values in the data sheet apply only to this specific yarn. The data listed here is within the normal range of product properties, but should not be used to establish specification limits nor used alone as a basis for design. The underlying tests were conducted at standard environment of 20 °C and 60 % humidity.

This information and our technical application advice - whether verbal, written or by way of trials - are given to the best of our knowledge, but are deemed to be non-binding advice only, also with regards to any third-party property rights. Our advice does not exempt your from verifying the information provided - especially in our safety data sheets and technical information - and to test our products as to their suitability for the intended processes and purposes. The application, use and processing of our products and the products manufactured by you on the basis of our application advice are beyond our control and are, therefore, exclusively your own responsibility. The sale of our products and our advice are subject to our General Terms and Conditions of Sale and Delivery as amended from time to time.

Caution: Do not use this product for medical applications that require permanent implantation in the human body.

Safety Data Sheet - SDS

0. Introduction

Basalt fibre may be considered as a specific type of glass fibre with a particular composition of oxides, thus basalt fibre can be treated equivalent to glass fibre. Continuous glass fibre products are articles under EU regulation (REACH & CLP), US regulation (TSCA) and Japanese Regulation and therefore, no SDS is legally required. FibreCoat decides to continue to provide our customers SDS for assuring the safe handling and use of continuous glass fibre products. This SDS was revised in accordance with GHS.

The sizings are multicomponent chemical systems. They do not pose any hazards and risks for workers because under normal conditions they release only minute or trace amounts of hazardous chemical that do not exceed the limits of allowable concentration.

1. Product and Company Identification

Product Name:	Aluminum Coated Basalt Fibre Product
Trademark:	AluCoat®
Manufacturer:	FibreCoat GmbH
Address:	Alexianergraben 9 52064 Aachen North Rhine-Westphalia Germany
Phone:	+49 241 93688530
E-Mail:	info@fibrecoat.de

2. Hazard Identification

GHS Classification:

Continuous basalt fibre products are articles. Therefore, they are not classified using GHS criteria, or by OSHA or EU legislation.

Label elements:

Continuous basalt fibre products are articles. Therefore, pictograms are not applied for our product labels.

Precautionary statement:

Contact with fibres can cause temporary irritation or itching to skin, eyes, nose or throat. Avoid breathing dust and contact with skin or eyes.

Follow these work practices:

- Wear long- sleeves, loose-fitting clothes, gloves and eye protection.
- Use a respirator approved by the national standards, such as a 3M Model 8710 or equivalent.
- Put waste fibre into a bag immediately after chopping and cutting aluminum coated basalt fibre to minimize released fibres.
- Wash exposed areas with soap and warm water and gargle after handling.
- Wash work clothes separately from other clothing.
- Consult a physician in case of prolonged irritation, itching or pain.

When chopping, cutting or grinding glass fibres and handling glass powder or milled fibre, use local exhaust ventilation to ensure that the level of floating particles are below safety standards. Glass fibres are nonflammable, but most sizing and binder agents coated on the fibres are flammable. Fibre fuzz or cotton-like forms are especially easy to catch fire.

Remove fuzz or cotton-like forms from the ventilation ducts and the working space.
Clean or vacuum the dust before using a grinding or welding machine.

3. Composition / Information on Ingredient

Substance/mixture: Article

Product/ingredient name	Content, Wt. %	CAS No.
Basalt continuous filament	>50	65997-17-3
Aluminum Coating (99,5 % Aluminum)	>49	7429-90-5
Organic sizing	<1	Not available

Basalt fiber may be considered as a specific type of glass fibre with particular composition of oxides, thus CAS number for basalt fibre is the same as for glass fibre: 65997-17-3 (Fiber glass wool, GLASS fibre; GLASS WOOL; LIME GLASS; fiberglass; fibreglass; GLASS BEADS; GLASS BALLS; Glass Fiber; GLASS POWDER).

The sizings are multicomponent chemical systems. They do not pose any hazards and risks for workers because under normal conditions they release only minute or trace amounts of hazardous chemical that do not exceed the limits of allowable concentration. However, it is recommended to take all possible safety measures, specified in Section 8.

Aluminum and aluminum alloys are considered an "article" and not hazardous in its solid form.

4. First-Aid Measures

Inhalation:	Gargle with clean water about ten times. Also, blow your nose gently. Seek medical attention if you feel some itching or irritation in the nose and/or throat.
Skin Contact:	Do not rub or scratch the affected areas. Rubbing or scratching may cause harsh itching or irritation. Rinse with running water first and then wash with warm water and soap.
Eye Contact:	Flush the eye with clean water for at least 15 minutes. Seek medical attention if irritation persists.
Ingestion:	Wash mouth with water thoroughly. Seek medical attention if necessary.

5. Fire-Fight Measures

Aluminum coated basalt fibre is non-flammable and non-combustible.

Suitable extinguishing agent:	Any of the extinguishing agents, including water, carbon dioxide gas, foam, dry chemicals and powder are effective. Select an extinguishing agent depending on circumstances (source of fire, etc.).
Suitable extinguishing method:	Use any of the ordinary fire extinguishing methods.
Other information:	Aluminum coated basalt fibre itself is not combustible. But the binders or surface treating agents on aluminum coated basalt fibre are generally combustible and give off little hazardous by-products other than carbon monoxide, carbon dioxide and water on combustion.

6. Accidental Release Measures

Personal precautions:	If necessary, wear a safety mask, safety gloves or safety goggles.
Environmental precautions:	No special environmental precautions required.
Cleanup Method:	If spilled on the floor, clean quietly so that dust particles will not be dispersed and put into a container or bag. For disposal, treat it same as general industrial waste.

7. Handling and Storage

Handling:	Avoid inhalation or contact with the eye or skin. If necessary, use gloves, safety glasses (preferably goggles) and dust mask (approved by the government authorities: replaceable/one-way). Aluminum coated basalt fibre is readily charged with static electricity. Static electricity can damage electronic components and cause explosions and fires. Take measures to prevent the buildup of electrostatic charge.
Storage:	N/A

8. Exposure Controls / Personal Protection

Appropriate engineering controls:

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Availability of a local suction is advised.

Personal Protective Equipment (PPE)

Respiratory protection:	At elevated airborne fibre and dust levels, we recommend using respiratory equipment (dust mask with fine filter according to EN 143), Filter P1 (EN 141).
Eye protection:	In case of airborne fibres and dust, we recommend wearing safety glasses (EN 166).
Hand protection:	We recommend safety gloves to avoid possible skin irritation (leather or cotton gloves).
Body protection:	Long-sleeved safety clothing as well as normal personnel protective equipment (e.g. safety boots EN 344).
General protection and hygiene:	Before breaks and after the end of the workday, wash hands thoroughly. In case of sensitive skin, apply a rich, protective hand lotion/cream. To protect against skin irritation, avoid wearing tight-fitting garments.

9. Physical and Chemical Properties

Shape/State of aggregation:	solid
Color:	silver
Odor:	inodorous
pH-Value:	N/A
Boiling point/boiling range:	N/A
Melting point/melting range: approx.	660 °C (melting point aluminum) 1050 °C (softening point of basalt)
Flash point:	N/A
Flammability:	The products are non-combustible.
Ignition temperature:	N/A
Self-ignition:	N/A
Danger of explosion:	N/A
Explosion limits lower:	N/A
Explosion limits upper:	N/A
Fire promoting properties:	Cannot be applied according to the laws of the European Community.
Vapor pressure:	N/A
Density, expressed as bulk density (20 °C):	2.67 g/cm ³ (raw basalt)
Solubility in water:	Insoluble
Solubility in fat:	Insoluble
Distribution coefficient n-Octanol/water:	N/A

10. Stability and Reactivity

Stability:	Stable at normal condition
Reactivity:	No specific test data related to reactivity available for this product or its ingredients.

11. Toxicological Information

Acute toxicity:	Not available.
Skin corrosion property stimulativeness:	Category 2
Critical damage and stimulativeness to eye:	Category 2B
Respiratory organs sensitization or skin sensitization:	Not available
Generative cell mutagenicity:	Not available
Carcinogenicity:	Not applicable. The International Agency for Research on Cancer (IARC) classes glass fibre into category 3 (No classification exists with regards to its carcinogenicity in humans.)
Reproductive toxicity:	Not available
Specified target organ general toxicity – single exposure:	Category 3
Specified target organ general toxicity – repetitive exposure:	Not available
Aspiration respiratory organs hazard:	Not available

12. Ecological Information

Persistence/degradability:	No data available.
Bioaccumulation:	No data available.
Mobility in soil:	No information available.

13. Disposal Consideration

For disposal, handle in the same manner as general industrial wastes. Also follow all other concerned laws, by laws and legal regulations.

14. Transport Information

Not classified as hazardous in the meaning of transport regulation. No correspondence to UN classification and UN number.

15. Regulatory Information

Glass fibre and aluminum coated basalt fibre as a specific type of glass fibre are considered an article and is exempted from requirements of TSCA, REACH, EINECS, DSL, AICS, KECL and so on.

Glass Fibre	CAS No.:	65997-17-3
Aluminum	CAS No.:	7429-90-5

16. Other Information

The information in this SDS has been prepared based on the materials, information and data that are currently available and may be updated or corrected based on new findings. Moreover, cautions apply to normal handling. In the event of special handling take safety measures appropriate for the applications and the methods. The information in this SDS is solely intended for providing information and does not constitute any guaranteed values.

Disclaimer

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