



**EU safety data sheet according to (EG) Nr. 1907/2006**

**Product name:** Aerogel Water Nano Thermal Insulation Coating AG-BRCJZ

**Current version:** 1.0.1, issued: 01.06.2023 **Replaced version:** 1.0.0, issued: 22.02.2023

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

**1.1 Product identifier**

**Product name:** Aerogel Water Nano Thermal Insulation Coating AG-BRCJZ  
**Product Code:** Modified Synthetic Amorphous Silica Aerogel Aqueous Nano Thermal Insulation Coating

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

Zhou Global Sourcing GmbH  
Bocksgasse 11  
73525 Schwäbisch Gmünd

Telephone no. +49 (0) 7171 9059 799  
e-mail info@insulation1.de

**1.3 Emergency telephone number**

**GERMANY:** CHEMTREC 0800-181-7059

**SECTION 2: composition of the substance or mixture**

Main Components	CAS No.	weight-%
Acrylic copolymer emulsion	25085-34-1	10-40
Modified silica aerogel powder	102262-30-6	3-15
Soda lime and borosilicate glass	65997-17-3	10-20
Deionized water	7732-18-5	10-30
1, 2-Propanediol	57-55-6	< 3

**SECTION 3: Hazard statements**

**Classification:** No harm under the Globally Harmonized System (GHS).

**Emergency Overview:** AG-BRCJZ aerogel water-based nano thermal insulation coating may produce a small amount of dust under specific action. Dust may cause mechanical irritation to lungs and skin.

## Potential health effects

- Eye Contact:** May cause mechanical stimulation. Avoid eye contact.
- Skin Contact:** May cause mechanical irritation and dry skin. Avoid contact with skin. No human sensitization cases have been reported.
- Inhalation:** Dust may irritate respiratory tract. Provide proper exhaust ventilation in places where dust will be generated.
- Ingestion:** Adverse health effects are not expected.
- Intake:** Do not eat. If you eat it by mistake, send it to hospital immediately.
- Acute health Harm:** The powder of the product may cause itchy throat, red and swollen eyes and itchy skin.
- Chronic Health Hazards:** The chronic health hazards of products are not known.
- It is known that exposure can cause an aggravated disease:** Inhalation of dust can irritate respiratory tract. Excessive inhalation of dust may aggravate the original chronic lung disease, such as bronchitis asthma, pulmonary edema, asthma, etc.

Synthesis of amorphous silica. No evidence of carcinogenicity was observed in repeated oral or inhalation exposures of amorphous silica in multiple animal species. Similarly, epidemiological studies show that there is no evidence that amorphous silica causes human cancer.

## SECTION 4: First aid measures

- General recommendations:** Consult a doctor and provide this chemical safety technical specification to the doctor on duty.
- Skin Contact:** Wash thoroughly with soap and water. If symptoms occur, see a doctor.
- Eye contact:** Rinse eyes immediately with plenty of water for 15 minutes. If symptoms occur, see a doctor.

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**Inhalation:** If coughing, shortness of breath or other breathing problems occur, transfer to fresh air. If symptoms persist, seek medical advice. If necessary, restore normal breathing through standard first aid measures.

**Ingestion:** The person must be immediately sent to hospital.

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## SECTION 5: Fire-fighting measures

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**Flammability:** Not applicable

**Ignition point:** Not applicable

**Flash point:** Not applicable

**Suitable extinguishing agent:**

Use foam, carbon dioxide (CO<sub>2</sub>), chemical dry powder or water spray. If water is used, mist water is recommended.

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## SECTION 6: Emergency treatment of leakage

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**6.1 Personal protection:**

Avoid the formation of dust and debris, and avoid inhaling dust and debris. Use personal protective equipment to ensure ventilation.

**6.2 Cleaning method:**

If the leakage contains dust or may produce dust, use an explosion-proof vacuum cleaner and/or a cleaning system suitable for combustible dust. It is recommended to use a vacuum cleaner with high efficiency particulate air (HEPA) filtration.

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## SECTION 7: Operation, disposal and storage

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**7.1 Safe operation:**

Dust may form explosive mixtures in the air. Take precautions against electrostatic discharge. The metal parts of all mixing and processing equipment must be grounded. Before starting the transfer operation, ensure that all equipment is electrostatically grounded.

**7.2 Storage conditions:**

Keep the container sealed and in a dry and well-ventilated place. Do not store with volatile chemicals, as they may be adsorbed on the product. Store at room temperature

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in a dark environment. Keep away from heat and fire sources. Store in properly labeled containers. Dust accumulation should not be allowed on the surface.

## SECTION 8: Exposure controls/personal protection

### 8.1 Exposure Limit:

Amorphous silica, regulatory exposure limits are found in general silica (CAS Number 7631-86-9).

<b>OSHA PEL (TWA)</b>	15 mg m <sup>-3</sup> (total dust) 5 mg m <sup>-3</sup> (respirable fraction)
<b>ACGH</b>	10 mg m <sup>-3</sup> (inhalable) 3 mg m <sup>-3</sup> (respirable)
<b>UK WEL</b>	6 mg m <sup>-3</sup> (inhalable fraction) 2.4 mg m <sup>-3</sup> (respirable fraction)
<b>Germany TRGS 900</b>	4 mg m <sup>-3</sup> (inhalable fraction) 8 mg m <sup>-3</sup> (inhalable fraction)

### 8.2 Personal protective equipment

#### Ventilation:

Ventilation measures shall be taken according to local industrial hygiene standards.

#### Respiratory protection:

If local exhaust ventilation is insufficient, an approved respirator may be necessary.

#### Hand protection:

Wear protective gloves to avoid dry skin. Use protective cream before handling the product. Wash hands and other skin in contact with mild soap and water.

#### Eye protection:

Wear goggles with edge guards.

#### Skin and body protection:

Wear suitable protective clothing. Wash clothes every day. Work clothes should not be taken out of the workplace.

#### Health measures:

Wash your hands at the beginning and at the end of your work.

## SECTION 9: Physical and chemical properties

### Physical state

Appearance	Sticky creamy liquid
Color	White

### Characteristic

Solubility in Water	Insoluble
Density	500-650 kg cm <sup>-3</sup>
pH	7-10
Odor	Low odor
Flammability	Inflammable

## SECTION 10: Stability and reactivity

**Chemical stability:** Maintain stability under recommended operation, disposal and storage conditions. The thermal decomposition temperature is higher than 300°C.

**Conditions to avoid:** Keep away from heat source and fire source to avoid dust formation. When heated above 300°C, the surface treatment of aerogels will decompose. The vapor caused by decomposition should be pumped away. Formaldehyde may be released when heated to high temperature in air.

**Hazardous decomposition Products:** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Formaldehyde, organic products of decomposition

## SECTION 11: Toxicological data

**Acute toxicity:** LD 50 orally-rats-during the observation period after a single oral administration of 5000 mg kg<sup>-1</sup>, there were no deaths and signs of toxicity. (OECD 402)

**Skin irritation and corrosion:** Not classified as irritant (OECD 404)

**Sensitization:** Unsensitized

**Carcinogenicity:** The product itself is non-toxic.

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**Inhalation hazard:** Based on industry experience and available data, no inhalation hazards are expected.

## SECTION 12: Ecological information

**Ecotoxicity:** The product itself has no data, refer to amorphous silica.  
Fish (zebrafish) LC50 (96 hours): > 10,000 mg/L (OECD 203)  
There is no acute toxicity to Daphnia in the range of EL and EL50 from 1000 to 10,000 mg/L (OECD 202)

**Mobility:** No migration is expected.

**Persistence and degradability:** The methods for determining biodegradability are not applicable to inorganic substances.

**Bioaccumulation:** Due to the physical and chemical characteristics of the substance, it is not expected to bioaccumulate.

**Other adverse effects:** No data.

## SECTION 13: Disposal of waste

Landfill treatment of products shall be carried out in accordance with relevant provincial, municipal and local regulations. The person who generates waste must determine its correct classification.

## SECTION 14: Transport information

**Shipping Name:** unregulated

**Hazard Class:** unregulated

**UN/IN:** Not Controlled

**Packing Group:** unregulated

**Required Label(s):** None

**Marine Pollutant:** None

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**ADR/RID:** Non-Hazardous Commodity

**IMDG:** Non-Hazardous Commodity

**IATA:** Non-Hazardous Commodity

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## SECTION 15: Regulatory information

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Safe use, storage, transportation, chemical handling, classification and labelling as specified by the following laws/regulations/standards:

Specification for Classification and Labelling of Chemicals (GB 30000.2 ~ 29-2013);

General Rules for Classification and Hazard Publicity of Chemicals (GB 13690-2009);

Regulations on Preparation of Chemical Safety Labels (GB 15258-2009).

This safety data sheet is prepared in accordance with the requirements of the national standard GB/T 16483-2008 "Technical Specifications for Chemical Safety-Contents and Project Sequence" and its supplement, and the national standard "Guidelines for Compilation of Technical Specifications for Chemical Safety".

List of hazardous chemicals: not included

List of Highly Toxic Chemicals: Not Included

List of Dangerous Goods: Not included

### **International Directory:**

TSCA-US Toxic Substances Control Act Section 8 (b) List Compliance

DSL/NDSL-Canada Domestic Substances List/Non-Domestic Substances List Compliance

EINECS/ELINCS-European List of Existing Chemical Substances/European List of Notified Chemical Substances Compliance

ENCS-Compliance with existing and new chemicals in Japan

IECSC-List of Existing Chemical Substances in China Complies with

KECL-Korea's existing and assessed chemicals meet

PICCs-Philippine List of Chemicals and Chemical Substances Compliance

AICS-Australian List of Chemical Substances Compliance

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## SECTION 16: Other information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Zhou Global Sourcing GmbH shall not be held liable for any damage resulting from handling of or contact with the above product.