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SECTION 1: Identification

Product identifier

Trade names: **Cryogel® Z**

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

No further relevant information available.

Application of the substance / the mixture High performance insulation material with foil laminate

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Aspen Aerogels, Inc.
30 Forbes Road, Bld. B
Northborough, MA 01532
USA
+1 (508) 691-1111

Further information obtainable from: EHS@aerogel.com

Emergency telephone number:

INFOTRAC: +1-352-323-3500 (international)
+1-800-535-5053 (US only)

SECTION 2: Hazards identification

Classification of the substance or mixture

The product is not classified, according to the Globally Harmonised System (GHS).

Additional information:

This Article Information Sheet (AIS) is provided as a courtesy in response to customer requests. The product is classified as an article according to local regulations. Articles are not subject to this geography's hazard communication regulations.

Label elements

GHS label elements None

Hazard pictograms None

Signal word None

Hazard statements None

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Hazardous components:

None

7631-86-9	amorphous silicon dioxide, chemically prepared	30.0-60.0%
	Fibrous glass, textile grade	10.0-30.0%
1332-58-7	Kaolin	0.0-5.0%

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Additional information:

Non-hazardous components are listed above due to the existence of country-specific occupational exposure level (OEL) values (see Section 8) or are being voluntarily disclosed.

The exact percentage concentration of composition has been withheld as a trade secret or is disclosed as a range due to batch variation.

SECTION 4: First-aid measures**Description of first aid measures**

General information: No special measures required.

After inhalation: Supply fresh air.

After skin contact:

Wash with plenty of soap and water.

If persistent skin irritation continues, consult a doctor.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: If symptoms persist consult doctor.

Most important symptoms and effects, both acute and delayed

Dust may cause mechanical eye, skin, or respiratory irritation.

Synthetic amorphous silica aerogels are hydrophobic (repel water) and may cause temporary drying and irritation of the skin, eyes, and mucous membranes.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Fire-fighting measures**Extinguishing media**

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

Special hazards arising from the substance or mixture

Product is a super-insulator. Rolls of material will retain heat within internal layers and can ignite after the fire is extinguished.

Keep hot material away from combustible materials. Cool hot insulation with plenty of water.

Advice for firefighters**Protective equipment:**

Normal firefighting procedures should be followed to avoid inhalation of smoke and gases produced by fire.

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

Avoid formation of dust.

Use personal protective equipment as required.

Ensure adequate ventilation.

Environmental precautions: No special measures required.

Methods and material for containment and cleaning up:

Collect using methods that avoid the generation of dust. Pick up large pieces and vacuum dust. Place in appropriate container for disposal.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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

Avoid dust contact with eyes, skin, and clothing. Avoid breathing dust.

This product may generate dust when handled. Because amorphous silica aerogel dust is hydrophobic, water may not be an effective dust control agent. Workplace exposures to all dusts should be controlled with standard hygiene practices.

Local exhaust should be the primary dust control method. Dry vacuuming is the preferred method for cleaning up dust.

This will help to minimize the area where dust exposure may occur. Scrap material should be packed for disposal. Wash hands with soap and water after handling.

Trimmed material may be reused in secondary applications and should be promptly packed in resealable bags.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Information about fire - and explosion protection: No special measures required.

Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Keep packaging tightly sealed until ready for use.

Store in a dry place.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: None.

Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection**Control parameters**

Ingredients with limit values that require monitoring at the workplace:	
7631-86-9 amorphous silicon dioxide, chemically prepared	
OEL	Long-term value: 10 mg/m ³
Fibrous glass, textile grade	
PEL	Long-term value: 10* mg/m ³ *fibrous glass dust
1332-58-7 Kaolin	
WSH	Long-term value: 2 mg/m ³

Additional information:

Monitoring of substance concentrations in air at the workplace may be necessary to ensure compliance with official exposure limit values and adequacy of exposure controls. For further information contact the supplier or the competent authorities.

The lists valid during the making were used as basis.

Exposure controls**Appropriate engineering controls**

Technical measures and the application of adequate working methods take priority over the use of personal protection equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures, such as personal protective equipment**General protective and hygienic measures:**

The usual precautionary measures for handling insulation materials should be followed.

Respiratory protection: Select fit and use in accordance with local and national regulations.

Hand protection The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

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Eye/face protection Appropriate safety eye wear is recommended.**Body protection:** Appropriate work clothing is recommended.**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties****General Information****Physical state**

Solid

Colour:

According to product specification

Odour:

Odourless

Odour threshold:

No data available.

pH

Mixture is non-soluble (in water).

Melting point/freezing point:

Undetermined.

Boiling point or initial boiling point and boiling range

Undetermined.

Flash point:

Not applicable.

Evaporation rate

Not applicable.

Flammability

Product is not flammable.

Lower and upper explosion limit**Lower:**

Not determined.

Upper:

Not determined.

Vapour pressure:

Not applicable.

Density and/or relative density**Vapour density**

Not applicable.

Density:

Not determined.

Relative density

Not determined.

Solubility**water:**

Insoluble.

Partition coefficient n-octanol/water (log value)

Not determined.

Decomposition temperature:

Not determined.

Viscosity:**Kinematic viscosity**

Not applicable.

Dynamic:

Not applicable.

Other information**Appearance:****Form:**

Fabric blanket with foil laminate

Important information on protection of health and environment, and on safety.**Ignition temperature:**

Product is not self-igniting.

Explosive properties:

Product does not present an explosion hazard.

SECTION 10: Stability and reactivity**Reactivity** Not reactive under normal conditions.**Chemical stability** Stable under normal conditions.**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** This product is an engineered material. Application should be validated with the manufacturer.**Incompatible materials:** Strong acids and bases.**Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information**Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Based on available data, components are not acutely toxic.

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Handling may cause dryness and may cause temporary irritation to skin.

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Handling may cause dryness and may cause temporary irritation to eyes.

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

No sensitising effects known.

Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**Information on other hazards****Endocrine disrupting properties**

None of the ingredients are listed.

SECTION 12: Ecological information**Toxicity****Aquatic toxicity:** Not toxic to aquatic environment.**Persistence and degradability** No further relevant information available.**Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.**Other adverse effects****Additional ecological information:****General notes:** Not hazardous for water.**SECTION 13: Disposal considerations****Waste treatment methods****Recommendation** Dispose of contents/container in accordance with local/regional/national/international regulations.**Uncleaned packaging:****Recommendation:** Cover promptly to avoid dust generation.**SECTION 14: Transport information****UN number or ID number****ADR, IMDG, IATA**

not regulated

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UN proper shipping name	
ADR, IMDG, IATA	not regulated
Transport hazard class(es)	
ADR, ADN, IMDG, IATA	
Class	not regulated
Packing group	
ADR, IMDG, IATA	not regulated
Environmental hazards:	Not applicable.
Maritime transport in bulk according to IMO instruments	Not applicable.
Special precautions for user	Not applicable.
UN "Model Regulation":	not regulated

SECTION 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****Poisons Act - Schedule 1**

None of the ingredients are listed.

Poisons Act - Schedule 2, Group II

None of the ingredients are listed.

Health Products Act - First Schedule - Psychotropic Substances

None of the ingredients are listed.

Directive 2012/18/EU**Named dangerous substances - ANNEX I** None of the ingredients are listed.**SECTION 16: Other information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet for storage, processing, transport, and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not valid for the new made-up material.

Department issuing SDS: EHS Department**Contact:** ehs@aerogel.com**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative