MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier: **Spaceloft A2**

Synonyms: None

Supplier:
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Recommended use: High performance insulation material
Restrictions on use: None.

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Regulation: (EC) No 1907/2006 and 453/2010 (REACH)

2. HAZARDS IDENTIFICATION

Classification:

Physical	Health	Environmental
Not Hazardous	Not Hazardous	Not Hazardous

Label Elements

Not hazardous in accordance with the Regulation (EC) 1272/2008 CLP.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	%	EU Classification (1272/2008)
Synthetic Amorphous Silica	7631-86-9	30-50%	Not Hazardous
Glass Fiber	65997-17-3	30-70%	Not Hazardous
Al_2O_3	1344-28-1	5-10%	Not Hazardous

4. FIRST AID MEASURES

General acute and delayed symptoms and effects:

Silica aerogels repel water (hydrophobic) and absorb lipids (lipophilic), therefore, dust may cause temporary drying and irritation of eyes, skin and respiratory system, if inhalation occurs, particularly to the upper respiratory tract, but also other mucous membranes.

Description of First Aid Measures:

Inhalation: If dust is inhaled, move to fresh air. Blow nose and drink several glasses of water to clear throat. Seek medical attention if symptoms persist or irritation occurs.

Skin contact: Wash skin thoroughly with soap and water. If irritation, swelling, itching, or burning occurs, seek medical attention. Wash clothing before reuse.

Eye contact: Do not rub eyes and flush them immediately with large amounts of water. If irritation, swelling, itching or other disturbances persists, seek medical attention.

Ingestion: Take several glasses of water if conscious. Do not induce vomiting.

5. FIRE INFORMATION AND FIRE-FIGHTING MEASURES

Flash Point: Not applicable
Explosion Limits in Air - Lower (g/m^3): Not determined
Method:

Autoignition Temperature: >450°C
Method: ASTM D-1929

Minimum Ignition Energy: Not determined
Method:

Burn Velocity: Not determined
Method:

Fire hazard: The product is non-combustible.

Extinguishing Media: Use extinguishing measures or media suitable the local circumstances and the surrounding environment. Place insulating material away from combustible materials and cool the product with water if the material is hot.

Special Protective Equipment: Wear suitable firefighting protective equipment, avoiding inhalation of gases and smoke produced by the fire.

Hazardous Decomposition and/or Combustion Products: Carbon monoxide, carbon black, carbon dioxide, organic products of decomposition, formaldehyde, nitrogen oxides, aldehydes, organic acids, hydrocarbons, hydrogen cyanide, dense smoke, irritating and toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Provide adequate ventilation, avoiding dust cloud formation. Use personal protective equipment as described in Section 8. Maintain away any source of ignition.

Cleaning: Use a suitable vacuum cleaner promptly. Avoid any dust cloud generation from the use of brushes or compressed air. Transfer all residues to a properly labeled container and dispose according to Section 13.

Environmental Precautions: No special environmental precautions required. Local authorities should be advised if significant spillages cannot be contained. Material is not soluble in water.

7. HANDLING AND STORAGE

Handling: Spaceloft A2 blankets and boards may generate dust when handled.

Control the workplace to avoid exposures to all dusts with standard industrial hygiene practices. Preferred method for primary dust control should be a local exhaust. Clean promptly any dust generated when handling the product, preferably through dry vacuuming method. If use of water is required, soap should be used for effective dust control, in order to overcome the hydrophobic nature of the aerogel. To help minimizing areas with dust exposure, the material should be unpacked directly in the work area. material in the work area. Scrap material should be disposed. If leftovers are still to be reused, store them in a place that properly contain any possible generated dust. Avoid breathing and direct contact of dust with skin, eyes and clothing. Wash hands and clothes with soap and water after handling.

Storage: Keep the material in containers tightly closed, placing them in a dry, cool and well-ventilated place, away from heat and fire sources. Avoid storing the material where contact with direct sunlight can occur. Avoid storage of Spaceloft A2 together with volatile chemicals as they may be adsorbed onto the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits for silica:

Amorphous Silica, The regulatory exposure limits are found under the general silica, CAS RN 7631-86-9:	Australia:	2 mg/m³, TWA, Respirable
	Austria MAK:	4 mg/m³, TWA, Inhalable fraction
	Finland:	5 mg/m³
	Germany TRGS 900:	4 mg/m³, TWA, Inhalable fraction
	India:	10 mg/m³, TWA
	Ireland:	2.4 mg/m³, TWA, Respirable dust
	Norway:	1.5 mg/m³, TWA, Respirable dust
	Switzerland:	4 mg/m³, TWA
	UK WEL:	6 mg/m³, TWA, Total inhalable fraction 2.4 mg/m³, TWA, Respirable fraction
	US OSHA PEL:	6 mg/m³
Dust, or Particulates Not Otherwise Specified:	US ACGIH – TLV:	10 mg/m³, TWA, Inhalable 3 mg/m³, TWA, Respirable
	Belgium:	10 mg/m³, TWA, Inhalable 3 mg/m³, TWA, Respirable
	China:	8 mg/m³, TWA 10 mg/m³, STEL
	Italy:	10 mg/m³, TWA, Inhalable 3 mg/m³, TWA, Respirable
	Malaysia:	10 mg/m³, TWA, Inhalable 3 mg/m³, TWA, Respirable
	Spain:	10 mg/m³, VLA, Inhalable 3 mg/m³, VLA, Respirable
	France.	10 mg/m³, TWA Inhalable dust 5 mg/m³, TWA Respirable dust

MAK: Maximale Arbeitsplatzkonzentration (Maximum Workplace Concentration)
OEL: Occupational Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value

TRGS: Technische Regeln für Gefahrstoffe (Technical Rule for Hazardous Materials)
TWA: Time Weighted Average
US ACGIH: United States American Conference of Governmental Industrial Hygienists
US OSHA: United States Occupational Safety and Health Administration
VLA: Valore Límite Ambientales (Environmental Limit Value)
WEL: Workplace Exposure Limit

Engineering controls: Provide adequate local exhaust ventilation to minimize exposures below occupational limits, in especially where product is processed in and dust can be generated.

Individual protection measures:

Respiratory protection: Appropriate certified particulate respirator is recommended when exposures limits are reached due to insufficient local exhaust ventilation, especially if the inhalation of dust generates irritation.

Skin and hand protection: Suitable gloves are recommended for handling product, to avoid skin dryness due to repeated exposure. Work clothing such as long-sleeves and pants are also advised.

Eye protection: Recommended use of safety glasses with side shields or dust goggles.

Other: Good industrial hygiene and safety practice as a general rule. It is recommended to have nearby eyewash and a safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/physical form:	White blanket or board (solid, flexible)
Odor:	None.
pH:	Not applicable
Vapor Pressure:	Not applicable
Decomposition temperature:	Above 450°C
Stability:	Stable at temperatures between -50 and 450°C
Boiling Point/Range:	Synthetic Amorphous Silica**:** 2230°C after partial decomposition
Melting Point/Range:	Synthetic Amorphous Silica**:** 1700°C after partial decomposition
Water Solubility:	Insoluble
Relative Density:	ca. 200 kg/m^3 @ 20°C
% Volatile (by Volume):	Negligible
Evaporation Rate:	Not applicable
Viscosity:	Not applicable
Partition Coefficient (n-octanol/water):	Not determined
Flash Point:	Not applicable
Explosion Limits in Air - Lower (g/m^3):	220 g/m^3 (dust)
Auto-ignition Temperature:	>450 °C

Method: ASTM D-1929

10. PHYSICAL AND CHEMICAL PROPERTIES

Reactivity: Not reactive under normal conditions of use.
Chemical stability: Stable.

Possibility of hazardous reactions: None known.

Conditions to avoid: Flame and prolonged exposure above the recommended use temperature should be avoided.

Incompatible materials: None known.

11. TOXICOLOGICAL INFORMATION

Acute effects of exposure:

Inhalation: Inhalation of dust may cause temporary irritation of the mucous membranes and upper respiratory tract.

Ingestion: No adverse effects expected, however, do not ingest.

Skin contact: Handling may cause dryness and temporary irritation of the skin.

Eye contact: Contact may cause irritation with redness and tearing. Dust may cause abrasive injury.

Chronic Effects: None known.

Sensitization: Components are not known to be sensitizers.

Germ Cell Mutagenicity: None of the components have been shown to cause germ cell mutagenicity.

Reproductive Toxicity: Components are not reproductive toxins.

Carcinogenicity: None of the components are listed as carcinogens or suspected carcinogens by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists) or EU (European Union).

Acute Toxicity Values: Components are not acutely toxic.

12. ECOLOGICAL INFORMATION

Ecotoxicity values: No data is available

Persistence and degradability: No data is available

Bioaccumulative potential: No data is available

Mobility in soil: No data is available.

Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Product should be disposed in an approved landfill in accordance with federal, state / provincial, and local regulation. Avoid dust generation by covering the product promptly.

14. TRANSPORT INFORMATION

Product not classified as dangerous according to transport regulations.

15. REGULATORY INFORMATION

Note concerning Regulation (EC) No. 1907/2006 (REACH)

AGITEC is neither a producer nor supplier of chemical substances or mixtures.

As defined by EC 1907/2006 (REACH) AGITEC is a so-called downstream user and producer of products. For these the creation of (material) safety data sheets (MSDS) is not provided.

For products there is only an obligation to provide information if substances from SVHC-list should be included. However, since this is not the case with all AGITEC-products, consequently and in full accordance with REACH-regulation no MSDS exists. Thus, the misleading impression should be avoided, that AGITEC products fall within the scope of Reach. In case of changes AGITEC will meet its obligations and will inform unsolicited, in accordance with the Reach-regulation.

16. OTHER INFORMATION

HMIS Rating

HMIS Index: * - chronic, 0 - minimal, 1 - slight, 2 - moderate, 3 - serious, 4 - severe

Health:	1
Flammability:	1
Physical Hazard:	0

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DISCLAIMER: The information provided in this Safety Data Sheet is believed to be accurate according to AGITEC, as of the effective date given. However, no warranty, expressed or implied, is intended. It is the user's responsibility to ensure that its activities comply with Federal, State or Provincial, and local laws, therefore, AGITEC assumes no legal responsibility for use or reliance thereon.