

MATERIAL SAFETY DATA SHEETS

For

Mesoporous aerogel insulation coating

Prepared for : Hunan Alf New Materials Co., Ltd.
Address : Sany Building, Zhongnan University, Yuelu District, Changsha City, Hunan Province

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Report Number : ESZ2306130009C00101R
Date of Conduct : 2023-06-13
Date of Report : 2023-06-19



Signed for and on behalf of
EMTEK (Suzhou) Co., Ltd.

Stamp For Test Report

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Jun. 19, 2023

Test results are only responsible for delivered samples. This test report is issued by the company and is intended for your exclusive use. This test report includes all of the test results requested by you and the results thereof based upon the information that you provided. You have 30 days from date of issuance of this test report to notify us of any error or omission caused by our negligence. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



MATERIAL SAFETY DATA SHEETS

1- Identification of the substance /preparation and of the company/undertaking

Sample Name : Mesoporous aerogel insulation coating
End Uses : /
Company Identification : Hunan Alfy New Materials Co., Ltd.
Company Address : Sany Building, Zhongnan University, Yuelu District, Changsha City, Hunan Province
FAX : /
Email : /
Phone Number : 13875938603

2- Hazards Identification

Fatalness Grade : According to GHS.

Name	CAS No.	EC No.	Classification		Labelling		
			Hazard Class and Category Code(s)	Hazard Statement Code(s)	Pictogram Signal Word Code(s)	Hazard Statement Code(s)	Suppl. Hazard statement code(s)
Acroleic acid	79-10-7	607-06-00-8	Flam. Liq. 3	H226	GHS02 GHS07 GHS05 GHS09	H226	/
			Acute Tox. 4 *	H302		H302	
			Acute Tox. 4 *	H312		H312	
			Skin Corr. 1A	H314		H314	
			Press. Gas	H332		H332	
			Aquatic Acute 1	H400		H400	

Hazard Symbols :



Harmful Combustion Corrosion Environmental hazards
 GHS07 GHS02 GHS05 GHS09

Signal word : Dangerous.

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- Invasion Route** : Skin contact, eye contact, inhalation, ingestion.
- Health Hazards** : Harmful if swallowed. Harmful in contact with skin. Causing severe skin burns and eye damage. Harmful by inhalation.
- Environment** : Extremely toxic to aquatic organisms.
- Hazards**
- Other hazards** : Continued exposure to high heat or an open flame may cause a fire.

3 - Composition / Information on Ingredients

Substance ☐Mixture ☐

Component/Substance	% by wt	CAS Number	EC Number
Acroleic acid	52-54	79-10-7	607-06-00-8
Water	46-48	7732-18-5	231-791-2

4 - First Aid Measures

- Skin Contact** : Rinse with plenty of water, seek medical attention in severe cases.
- Eye Contact** : Rinse carefully with water for a few minutes. If contact lenses are worn and easily removed, remove the contact lenses and continue rinsing. Seek medical attention in severe cases.
- Inhalation** : Move to fresh air, keep comfortable position for breathing, seek medical attention in severe cases.
- Ingestion** : Induce vomiting. Rinse mouth and drink plenty of water. If you feel unwell, seek medical attention.

5 - Fire-Fighting Measures

- Danger Characteristic** : Continued exposure to high heat or an open flame may cause a fire.
- Harmful Combustion** : Carbon oxides and other toxic irritating fumes.
- Products**
- Fire-Fighting Method & Media** : Recommended extinguishing media: water mist, dry powder, sand, anti-solvent foam, carbon dioxide, etc.
- Additional Information** : Wear self-contained breathing apparatus and protective clothing to

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prevent skin and eye contact.

6 - Accidental Release Measures

Emergency treatment : Isolate the spill area and restrict personnel access. Cut off the source of ignition.

Personnel should wear appropriate protective clothing, face shields, and use tools that do not produce sparks.

Dispose of after cleaning, collection and recycling or harmless disposal.

Avoid spillage into the environment.

7 - Handling and Storage

Precautions for safe handling : Wash skin thoroughly after handling. Prevent damage to packaging and containers. Keep container tightly closed. Do not go near fire or heat sources.

Conditions for safe storage, including any incompatibilities : Store in a cool, dry and ventilated place.

8 - Exposure Controls / Personal Protection

Occupational exposure limit : Occupational exposure limit is not established.

Maximum Admissible Concentration : /

Monitoring Method : /

Engineering Control : Provide eye wash and quick-wetting equipment in the work area. The general exhaust system can meet the health hazard control of this substance. Nonetheless, in the event of worker discomfort, the use of a local ventilation system may be considered.

Respiratory Protection : General protection. In case of fire, wear self-contained breathing apparatus.

Eyes Protection : If eye contact is possible, wear goggles or a face shield.

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- Body Protection** : Wear clean full-body work clothes.
- Hands Protection** : Wear protective gloves.
- Other Protections** : Smoking, eating and drinking are prohibited at the workplace. Practice good hygiene.

9 - Physical and Chemical Properties

Appearance	: Liquid.	Odor	: Slightly odorous.
Color	: White.	Density	: 0.55~0.6g/cm ³ .
Melting Point	: No data available.	Flashing Point	: No data available.
pH	: 8~9.	Specific Heat	: No data available.
Vapor Pressure	: No data available.	Solubility	: Infinite mutual solubility.
Boiling point / range	: Internal solvent is water, 100 °C.	Freezing point	: -5~0°C.
Viscosity (mPas)	: 120KU.	Evaporation rate(kg/s)	: Similar to water.
Auto-ignition temperature(°C)	: Around 400 °C	Decomposition temperature	: The aging temperature is around 200 °C

10 - Stability and Reactivity

- Reactivity** : Chemical inertness, no reactivity.
- Stability** : Stable under normal conditions.
- Avoid contact condition** : High temperature, open flame.
- Prohibited content** : Alkali metals, acid anhydrides, strong oxidants.
- Hazardous decomposition product** : Product exposed to heat or open flame may decompose into carbon oxides and other toxic/irritating fumes.

11 - Toxicological Information

Chemical name	RTECS No.
Acroleic acid	AS4375000

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Acute Toxicity:

Acroleic acid	LD50	33500 ug/kg(Oral- Rodent - mouse)
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Irritation : No data available. **Carcinogenicity** : No data available.
Allergenicity : No data available. **Reproductive Toxicity** : No data available.
Mutagenicity : No data available. **Health hazard** : Harmful if swallowed. Harmful in contact with skin. Causing severe skin burns and eye damage. Harmful by inhalation.

Aspiration hazard : No data available.

12 - Ecological Information

Ecotoxicity : No data available.
Persistence And Degradability : No data available.
Bioaccumulative Potential : No data available.
MobilityIn Soil : No data available.
Other Harmful Effects : /

13 - Disposal Considerations

Nature Of Waste : /
Waste Disposal Methods : Dispose of residual and non-recyclable product/container to a licensed company.
Attention Abandoned : Disposal regulations in various places may be different from those of the Chinese government, and they should be disposed of according to national and local requirements.

14 - Transport Information

UN Number : /

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Shipping Name : None.
Classification : /
Packaging Group : None.
(if applicable)
Transport Attentions : The substance is not classified as an Environmentally Hazardous Substance/Marine Pollutant.

15 - Regulatory Information

Regulatory Information : Domestic authority regulations:
 Regulations on the Safety Administration of Dangerous Chemicals (2011).
 This substance is not listed in General rule for classification and hazard communication of chemicals (GB 13690-2009).
 International Regulations:
 Commission Regulation (EC) No.1907/2006 (REACH) and its amendments.
 Commission Regulation (EC) No. 1272/2008 (CLP) and its amendments.
 Waste Framework Directive 2008/98/EC and its amendments.
 Toxic Substance Control Act (TSCA).

16 - Other Information

Date : Jun. 19, 2023
Data Audit Units : EMTEK (SUZHOU) CO., LTD
Abbreviation : EC: European Inventory of Existing Commercial chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 RTECS: Registry of Toxic Effects of Chemical Substances.
The term : LD50: Lethal dose, 50 percent kill.
 H226 : Flammable liquid and vapour.
 H302 : Harmful if swallowed.
 H312 : Harmful in contact with skin.
 H314 : Causes severe skin burns and eye damage.
 H332: Harmful if inhaled.
 H400: Very toxic to aquatic life.
Other Information : The above information based on accurate data, because this information may be applied under conditions beyond our control, or is modified, and we do not bear

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