
1. IDENTIFICATION OF PRODUCTS AND MANUFACTURER

Name: AMAGEL A2
Acronim: Silica Aerogel
Supplier: AMA Composites Srl
Adress: Via Repubblica 7 41011 Campogalliano (MO)
Email: info@amacomposites.it
Telephone number for emergency: Centro Antiveleni Ospedale Niguarda Milano
02-66101029 24H

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	EINECS Number	Percent
Amorphous silica	112945-52-5	231-545-4	35-60%
Glass fiber	None	None	20-50%
Al2O3	1344-28-1	215-691-6	5-10%

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

Product is not classified as a dangerous material or preparation as defined in National List of Hazardous Chemicals, in GB 6944-2005 Classification and Number of Hazardous Chemicals and in Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

CARCINOGENICITY:

Component	ACGIH	IARC
Amorphous silica	None	None
Glass fiber	A4	3
Al2O3	Not Listed	None

ACGIH: American Conference of Governmental Industrial Hygienists

IARC: International Agency for Research on Cancer

Eye Contact: Exposure to dust from this product can produce a drying sensation and irritation of the eyes. Seriously, it can cause pain and redness.

Skin Contact: Skin contact with dust from this product can produce a drying sensation and irritation of the skin and mucous membranes. Excessive contact may aggravate existing dermatitis.

Ingestion: This material is not intended to be eaten. If ingested in large quantity, the material may produce irritation and blockage.

Inhalation: Inhalation of airborne dusts may cause irritation of the upper respiratory tract. Excessive inhalation may aggravate pre-existing chronic lung conditions including, but not limited to, bronchitis, emphysema, and asthma.

Environmental hazards: No harm to the environment as per National Catalogue of Hazardous Wastes.

Explosion Hazards: This product is not flammable, but the plastic encapsulations will burn in the event of fire.

4. FIRST AID MEASURES

Eye Contact: Immediately wash with large amounts of water for at least 15 minutes, occasionally lifting lids. If irritation occurs and persists, get medical treatment.

Skin Contact: Remove contaminated clothing and shoes, and wash skin thoroughly with soap and plenty of water. Wash clothing before reuse.

Ingestion: If symptoms persist, seek medical attention immediately.

Inhalation: Remove to fresh air. If symptoms persist, seek medical attention immediately.

5. FIRE-FIGHTING MEASURES

FLAMMABILITY PROPERTIES:

Auto ignition Temperature:	Not Applicable
Flash Point:	Not Applicable
Flammability Limits: (Lower Explosive Limit):	Not Applicable
Flammability Limits: (Upper Explosive Limit):	Not Applicable
Harmful Combustion Products:	In the scene of a fire, primary combustion products are carbon monoxide, carbon dioxide and dihydrogen oxide.

Fire Fighting Procedures: Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases produced by a fire. Protective clothing are needed. Firefighters should stand in the tuyere, and use the fire-fighting facilities for surrounding environment.

Suitable extinguishing agent: Dry powder, foam, mist shape water or carbon dioxide

Hazards: The product is a super-insulation material. Rolls of material can retain heat within internal layers and re-ignite combustible materials if heat is not removed.

6. ACCIDENTAL RELEASE MEASURES

Personal Protective: Chemical protective clothes and dustproof mask are needed(full cover).

Environmental Precautions: Insoluble in water. It is strictly prohibited to environmental emissions without treatment to avoid block.

NOTES: Powder and fragments should be cleaned up using a method that will avoid the creation of dust in the workplace atmosphere. A vacuum cleaner is recommended.

7.HANDING AND STORAGE

Handling: Aerogel blankets will generate dust when handled. Workplace exposure to all dusts should be controlled with standard industrial hygiene practices. Because aerogel dust is hydrophobic, dry vacuuming is the preferred method for cleaning up dust.

It is suggested to wear approved respiratory protective equipment, protective glasses and gloves. Don't make dust touches the skin, eyes or clothes. Clean thoroughly after handling.

Storage: It should be stored in cool, dry and ventilated warehouse.
Aerogel blankets should be kept in their packaging until they are ready to be used. It will help to minimize the area where dust exposure may occur.
The waste after cutting should be promptly packed in disposal bags.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limit Values

AVERAGE VALUE (8 HOURS)					
Component	CAS Number	US OSHA PEL(TWA)		UK WEL	
		Total inhalable fraction	Inhalable fraction	Total inhalable fraction	Inhalable fraction
Amorphous silica	112945-52-5 68909-20-6	15mg/m ³	5mg/m ³	6mg/m ³	2.4mg/m ³
Al ₂ O ₃	1344-28-1	15mg/m ³	5mg/m ³	10mg/m ³	4mg/m ³
Glass fiber	—	5mg/ m ³	2mg/ m ³	—	—

Ventilation: Local exhaust in accordance with general industrial hygiene practices is recommended to control dust.

Respiratory Protection: A properly fitted, NIOSH or CE approved respirator should be worn.

Eye Protection: Safety glasses, or chemical goggles as needed to provide greater protection from dust.

Skin Protection: Nitrile, latex, or other impermeable coat should be worn when handling aerogel blankets.

Hand Protection: Nitrile, latex, or other impermeable gloves should be worn when handling aerogel blankets.

Other Protection: Keep a good Hygienic Practice. Smoking, eating and drinking are not allowed in work area. Wash hands before eating or drinking. Wash thoroughly after using the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White fabric blanket

PH: Not applicable

Boling Point Not applicable

Relative density (water=1) Not applicable

Melting Point: Not applicable

Vapor pressure: Not applicable

Solubility: Insoluble

Key property: Insulation

10. STABILITY AND REACTIVITY

Chemical stability: Stable

Materials to Avoid: Organic solvent.

Conditions to Avoid: Temperatures above the recommended use temperature
Hazardous: None
Decomposition products: Primary combustion products are carbon monoxide, carbon dioxide and dihydrogen oxide.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Dust may cause irritation and dryness to eyes and skin.

Amorphous Silica:

LD50: >5,000 mg/kg (Oral)

LC50: >2,000 mg/m³ (Inhalation)

LD50: >3,000 mg/kg (Dermal)

Eye Irritation: It is not irritating to eyes under experimental conditions, but may produce dryness following prolonged and repeated exposure.

Skin Irritation: It is not irritating to skin under experimental conditions, but may produce dryness following prolonged and repeated exposure.

Aluminum oxide LD50: >5,000 mg/kg (Oral)

Eye Irritation: Slightly irritating.

Skin Irritation: Non-irritating

Reproductive Toxicity: None

Carcinogenicity: None.

Mutation: None

Teratogenic toxicity: None

12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Amorphous Silica Fish: LC50 > 10,000 mg/L (Brachydanio rerio: 96 hour), Method OECD 203

Daphnia magna: EC50 > 10,000 mg/l (24 hours), Method OECD 202

Aluminum oxide Fish: LC50 > 10,000 mg/L

Persistence and Biodegradability : Not applicable for inorganic material.

Bioaccumulative Potential : None, due to insoluble nature of product.

Other Adverse Effects : None.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: It is not classified as hazardous waste, and can be disposed of at a normal landfill site that has been licensed for the disposal of industrial waste.

14. TRANSPORT INFORMATION

Shipping Name: Not regulated for transport

Hazard Class: None

UN Number: None

Packing Group: None

Material Safety Data Sheet AMAGEL A2 – from 01-01-2020

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Required Label(s): None
Additional Information: None

NOTES: Try to keep packing integrity, and avoid dust, heat, and fire on the prescribed route. Organic solvents are not allowed to be mix shipped with.

15. REGULATION INFORMATION

Regulations on the Safety Use of Chemicals in Workplace (File No.423 by Ministry of Labor in 1996)
Classification and Mark of Common Dangerous Chemicals (No.344 by the State Council of PRC)
National Catalogue of Hazardous Wastes (2008 Appendix by Ministry of Environmental Protection)
Catalogue of Dangerous Chemicals (2002 Edition)
GB 6944-2005 Classification and code of dangerous goods
Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
American Conference of Governmental Industrial Hygienists (ACGIH)
International Agency for Research on Cancer (IARC)
Occupational Safety and Health Act (OSHA)

16. OTHER INFORMATION

For purposes of this MSDS, International Specialty Products, as responsible party, provides the information herein which is intended for use by persons who have or should obtain professional knowledge and experience in the subjects discussed. AMAComposites industrial products are used as materials in the production of products by industrial customers.

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