

Safety Data Sheet

AMI-SIL[®] AS, CAS, ASBR, AS/AR, CAS/AR, and AST SERIES

1 | Page

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Trade Names/Synonyms:</u>	AMI-SIL [®] /amorphous silica in various forms - cloth, tapes, blankets, tubing, rope, etc.
<u>Product Identification:</u>	AS, CAS, ASBR, AS/AR, CAS/AR, and AST series.
<u>Chemical Name/Synonyms:</u>	Continuous filament silicon dioxide (SiO ₂)/fibrous silica, amorphous silica chemical family.
<u>Manufacturer's Name:</u>	Auburn Manufacturing, Inc P. O. Box 220 Mechanic Falls, ME 04256 207/345-8271

2. HAZARDS IDENTIFICATION

OSHA HCS Status: This product is not a hazardous chemical, as defined by OSHA at 29 CFR 1910.1200



Precautionary Statements:

- P281: Wear personal protective equipment as required
- P302: If on skin, wash with mild soap and running water
- P304: If inhaled, move individual to fresh air. Seek medical attention if irritation persists
- P305: If in eyes, flush eyes at least 15 minutes; seek medical attention if irritation persists

Hazard Statements: N/A

Safety Data Sheet

AMI-SIL[®] AS, CAS, ASBR, AS/AR, CAS/AR, and AST SERIES

2 | Page

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>Weight %</u>	<u>OSHA-PEL</u>	<u>ACGIH-TLV</u>	<u>OTHER</u>
Silicone dioxide, continuous filament	≥ 90	a.	10 mg/ m ³ . 8-hr TWA	none known

Nonhazardous Ingredients

Sizing/bound water	≤ 10	-----none established-----		
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a. OSHA has not established a specific PEL for fibrous silicone dioxide (amorphous silica). It is considered to be a "particulate not otherwise regulated" (PNOR) and is covered under the OSHA nuisance dust PEL's of 5 mg/m³ for the respirable dust fraction and 15 mg/m³ for the total dust fraction for an 8-hr TWA (Time Weighted Average). Chemically, AMI-SIL[®] is amorphous silica which has an OSHA limit of 20 mppcf or 80 mg/m³.

4. FIRST AID MEASURES

Inhalation: Move individual to fresh air. Seek medical attention if irritation persists.

Skin Contact: Wash with mild soap and running water. Use a washcloth to help remove fibers. To avoid further irritation do not rub or scratch irritated areas. Rubbing or scratching may force fibers into the skin. Seek medical attention if irritation persists.

Eye Contact: Flush eyes with flowing water for at least 15 minutes. Seek medical attention if irritation persists.

Ingestion: N. A. (Not Applicable)

5. FIRE FIGHTING MEASURES

Extinguishing Media: Water, foam, carbon dioxide, dry chemical

Special Fire-Fighting Instructions: In a sustained fire, self contained breathing apparatus should be worn.

Unusual Fire and Explosion Hazards: None known.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS (Use Appropriate Safety Equipment/PPE):

For solid product, not applicable.

For dusts and fibers generated during fabrication, vacuum and containerize.

Safety Data Sheet

AMI-SIL® AS, CAS, ASBR, AS/AR, CAS/AR, and AST SERIES

3 | Page

7. HANDLING, STORAGE AND DISPOSAL

Handling: See Section 8.

The toxicologic data indicate that these materials should be handled with caution. The handling practices described in Section 8 of this SDS must be strictly followed.

Product which has been in service at elevated temperature (> 1800° F) may undergo partial conversion to cristobalite, a form of crystalline silica. This reaction occurs at the lining hot face. As a consequence, this material becomes more friable (brittle); special caution must be taken to minimize generation of airborne dust. The amount of cristobalite present will depend on the temperature and length in service.

IARC has recently reviewed the animal, human and other relevant experimental data on silica in order to critically evaluate and classify the cancer causing potential. Based on its review, IARC has now classified crystalline silica/cristobalite as a Group 1 carcinogen. Crystalline silica inhaled in the form of quartz or cristobalite from industrial sources was classified as *carcinogenic to humans* on the basis of a relatively large number of epidemiological studies that together provided *sufficient evidence* in humans for the carcinogenicity of inhaled crystalline silica under the conditions specified. Crystalline silica is also listed by the NTP as a substance reasonably anticipated to be a carcinogen.

Therefore, special care should be taken when working with "used" material to minimize the generation of dust. The OSHA permissible exposure limit (PEL) for cristobalite is 0.05 mg/m³ (resp.). The ACGIH threshold limit value (TLV) for cristobalite is 0.05 mg/m³ (resp.). (ACGIH 1989 - 90). If exposure limits are exceeded or if irritation is experienced, NIOSH approved respiratory protection should be worn. NIOSH approved respirator for particulates with a TLV of less than 0.05 mg/m³ is generally acceptable, except that supplied air respirators are required for high airborne dust concentrations.

Storage: Store in a clean, dry area. Keep containers closed.

Disposal: Dispose in accordance with federal, state and local regulations as a solid nonhazardous waste.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: General dilution ventilation and/or local exhaust ventilation should be provided, as necessary, to maintain exposures below PEL's or TLV's. **Adequate ventilation must be provided at elevated temperatures.** The base silica material is noncombustible; however, at temperatures above 250°F, the coating may generate some light steam and/or smoke for a brief period which may require local ventilation and/or exhaust.

Safety Data Sheet

AMI-SIL® AS, CAS, ASBR, AS/AR, CAS/AR, and AST SERIES

4 | Page

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: A properly fitted NIOSH/MHSA approved disposable dust respirator such as the 3M model 8210 or model 9900 (in high humidity environments) or equivalent should be used when: high dust levels are encountered; the level of fibers in the air exceeds the OSHA permissible exposure limits; or if irritation occurs. Use respiratory protection in accordance with your company's respiratory protection program and OSHA regulations under 29 CFR 1910.134.

Eye Protection: Wear safety glasses or chemical goggles to prevent eye contact. Contact lenses should not be worn unless chemical goggles are also used and care is taken not to touch the eyes with contaminated body parts or materials. Have eye washing facilities readily available where eye contact can occur.

Protective Clothing: Wear loose fitting, long sleeved shirt that covers to the base of the neck, and long pants. Skin irritation from exposure to fiberglass is known to occur chiefly at pressure points such as around the neck, wrist and waist. Wear gloves when handling product.

Work/Hygienic Practices: Handle in accordance with good industrial hygiene and safety practices:

- = Avoid unnecessary exposure to dusts and fibers
- = Remove fibers from skin after exposure
- = Be careful not to rub or scratch irritated areas. Rubbing or scratching may force the fibers into the skin. The fibers should be washed off. Use of barrier creams can, in some instances, be helpful.
- = Use vacuum equipment to remove fibers and dusts from clothing. **COMPRESSED AIR SHOULD NEVER BE USED.** Always wash work clothes separately and wipe out the washer/sink in order to prevent loose glass fibers from getting on other clothes.
- = Keep the work area clean of any dusts and fibers generated during fabrication. Use vacuum equipment to clean up dusts and fibers. Avoid sweeping or using compressed air as these techniques resuspend dusts and fibers into the air.
- = Have access to safety showers and eye wash fountains.
- = For professional use only. **Keep out of children's reach.**

Exposure Limits (TLVS): see sec 7

Safety Data Sheet

AMI-SIL[®] AS, CAS, ASBR, AS/AR, CAS/AR, and AST SERIES

5 | Page

9. PHYSICAL AND CHEMICAL PROPERTIES

Melting Point (Softening): >3000°F Boiling Point(°C): N/A (Not Applicable)
Specific Gravity (Bare Glass): 2.2 Percent Volatile: N/A
Vapor Pressure: (mm Hg): N/A Vapor Density (Air = 1): N/A
Evaporative Rate (Ethyl Ether = 1): N/A Solubility in Water: Not soluble
Appearance and Odor: White/off-white/tan colored solid with no odor; AR series has an orange or black color.
pH: N/A Relative Density: N/A
Upper/Lower Flammability or Exposure Limits: N/A
Freezing Point: N/A Flash Point: N/A
Partition coefficient (n-octanol/water): N/A Auto Ignition Temperature: N/A
Decomposition Temperature: N/A Viscosity: N/A

10. STABILITY AND REACTIVITY

Stability (Conditions to Avoid): Product is stable.
Stabilizers: N/A
Incompatibility (Materials to Avoid): Basic phosphates, hydrofluoric acid, some oxides and hydroxides.
Hazardous Decomposition Products: Sizings or binders may decompose in a fire. Primary decomposition products include carbon monoxide, carbon dioxide, other hydrocarbons and water.
Hazardous Polymerization: Will not occur.
Flash Point (°F): N/A (Not Applicable)
Auto Ignition Temperature (°F): N/A
Flammability Limits (%): LEL: N/A UEL: N/A

Safety Data Sheet

AMI-SIL® AS, CAS, ASBR, AS/AR, CAS/AR, and AST SERIES

6 | Page

11. TOXICOLOGICAL INFORMATION

Primary Routes of Exposure: Inhalation and skin contact.

Health Hazards (Including acute and chronic effects and symptoms of overexposure):

<u>ACUTE:</u>	<u>Inhalation:</u>	Inhalation of dusts and fibers may result in irritation of the upper respiratory tract (mouth, nose and throat).
	<u>Skin Contact:</u>	Skin contact with dusts and fibers may produce itching and temporary mechanical irritation.
	<u>Eye Contact:</u>	Eye contact with fibers and dusts may produce temporary mechanical irritation.
	<u>Ingestion:</u>	Temporary mechanical irritation of the digestive tract. Observe individual. If symptoms develop, consult a physician.

CHRONIC: See carcinogenicity section below. There are no known health effects associated with chronic exposure to this product.

CARCINOGENICITY:

Hazardous Ingredients:	Listed as carcinogen by:	<u>ACGIH</u>	<u>IARC</u>	<u>NTP</u>	<u>OSHA</u>
Silicone dioxide, continuous filament		NA	NA	NA	NA

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Persons with a history of chronic respiratory or skin conditions that are aggravated by mechanical irritants may be at increased risk for worsening their condition from exposure during use of the product.

12. ECOLOGICAL INFORMATION

N/A

13. DISPOSAL CONSIDERATIONS

See Section 8 (if applicable)

14. TRANSPORT INFORMATION

N/A

Safety Data Sheet

AMI-SIL[®] AS, CAS, ASBR, AS/AR, CAS/AR, and AST SERIES

7 | Page

15. REGULATORY INFORMATION

No products made by Auburn Manufacturing Incorporated contain any California Proposition 65 substances as of the 12/29/17 update or come in contact with California Proposition 65 substances during the manufacturing process.

16. OTHER INFORMATION

SDS #5 Date prepared

May 23, 2014

Added California Proposition 65 Statement

Sept. 10, 2018

To the best of our knowledge, the information contained herein is accurate. The information provided is based upon data furnished by our suppliers. However, neither Auburn Manufacturing, Inc. nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. While believed to be reliable, the information or products are intended for use by skilled persons at their own risk. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.