

MATERIAL SAFETY DATA SHEET

Date 7/8/04

SECTION I - MANUFACTURER'S INFORMATION

NAME: Amatex Corp. PRODUCT: Silica Fabric
ADDRESS: 1032 Stanbridge St. HTX-600
Norristown, PA 19404 HTX-1000
TELEPHONE: (610) 277-6100 COATING: 7N or 9N - Vermiculite (Vertex)

PRODUCT DESCRIPTION: Vermiculite Coated Silica Fabric

SECTION II - OSHA HAZARDOUS SUBSTANCES

<u>COMPONENT</u>	<u>CAS NO.</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Amorphous Silica	7631-86-9		80 mg/m ³ /%SiO ₂
Nonrespirable		10 mg/m ³	
Respirable		3 mg/m ³	
<u>Vermiculite</u>			
Nonrespirable		10 mg/m ³	15 mg/m ³ , total dust
Respirable		3 mg/m ³	5 mg/m ³

Note: There is not an established threshold limit value (TLV) that is directly applicable to this family of silica materials. (The exposure limits shown are taken from the OSHA and ACGIH list of air contaminants which include various forms of amorphous silica.) Chemically, this product contains amorphous silica with trace elements of aluminum, titanium, and iron. This form of silica will partially transform to a cristobalite structure when subjected to steady state temperatures above 1850° F (a form of crystalline silica-CAS No. 14464-46-1, ACGIH TLV - 0.05mg/m³ (Respirable); OSHA PEL - 5 mg/m³ / (%SiO₂+2), respirable, and 15 mg/m³ / (%SiO₂+2), total).

SECTION III - PHYSICAL DATA

BOILING POINT: N/A SPECIFIC GRAVITY: 2.0
MELTING POINT: N/A VAPOR DENSITY: N/A
PERCENT VOLATILE: N/A VAPOR PRESSURE: N/A
SOLUBILITY IN WATER: N/A EVAPORATION RATE: N/A
APPEARANCE AND ODOR: White solid, coated side bronze; with no odor

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT: N/A METHOD USED: N/A
AUTO IGNITION TEMP: N/A FLAMMABILITY LIMITS: N/A
EXTINGUISHING MEDIA: Water, foam, carbon dioxide, dry chemical
SPECIAL FIRE FIGHTING INSTRUCTIONS: N/A
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: Inhalation and skin contact

HEALTH HAZARDS:

ACUTE: Possible mechanical irritation accompanied by itching or dermatitis.

CHRONIC: None known.

NOTE: This form of silica will partially transform to a cristobalite structure when subjected to steady state temperatures of above 1850° F. In the event the silica fabric is exposed to continuous temperatures exceeding 1850° F, appropriate caution should be exercised.

Health hazard information relating to the vermiculite coating and as supplied by the manufacturer is presented at the end of this MSDS under Supplemental Information.

SECTION VI - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If irritation develops remove to fresh air.

SKIN CONTACT: If irritation develops, wash with mild soap and water. To avoid further irritation do not rub or scratch. Seek medical attention if irritation persists.

EYE CONTACT: Flush with flowing water for 15 minutes.

INGESTION: N/A

FOR ALL CONDITIONS SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.

SECTION VII - EMPLOYEE PROTECTION

THE FOLLOWING PRECAUTIONS ARE ADVISABLE DURING CUTTING AND FABRICATION OR OTHER OPERATIONS THAT COULD GENERATE DUST WHILE USING THIS MATERIAL.

VENTILATION: General dilution and/or local exhaust ventilation should be provided as necessary to maintain exposures below PEL's or TLV's.

RESPIRATORY PROTECTION: A properly fitted NIOSH/MHSA approved dust respirator should be used when: the level of dust in the air exceeds 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.

Use High Efficiency Air Particulate type respiratory protection if working with this material while or after it has been exposed to steady state temperatures in excess of 1850° F.

EYE PROTECTION: Use safety glasses, goggles, or face shields, as necessary.

PROTECTIVE CLOTHING: Wear loose fitting long sleeve shirt and pants or other appropriate clothing to protect those areas where irritation is experienced.

WORK/HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practices.

- Remove dust and fibers from the skin after exposure. Be careful not to rub or scratch irritated areas which could force fibers into the skin. Fibers should be washed off.
- Use of barrier creams can, in some instances, be helpful.
- Use vacuum equipment to remove fibers and dust from clothing. Wash contaminated clothing separately and wipe out washer/sink in order to prevent loose fibers and dust from contaminating other laundry.
- Keep work area free of excessive buildup of fiber and dust during fabrication. Use vacuum equipment to clean up.

SECTION VIII - REACTIVITY DATA

STABILITY: Product is stable.

INCOMPATIBILITY: Product is not compatible with the basic phosphates, hydrofluoric acid, some oxides and hydroxides, especially at elevated temperatures.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO². Other undetermined compounds could be released in small quantities. The base fabric will partially transform to a cristobalite structure when subjected to steady state temperatures of above 1850° F.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION IX - STORAGE PRECAUTIONS

No special precautions necessary.

SECTION X- ENVIRONMENTAL PROTECTION

SPILLS: N/A

WASTE DISPOSAL: Dispose as a solid non-hazardous waste, in accordance with federal, state, and local regulations.

SUPPLEMENTAL INFORMATION

Vermiculite: This product is a chemically delaminated vermiculite dispersed in 80-95% water. The vermiculite used in this product is a naturally occurring mineral mined in South Carolina which contains tremolite in the ore body. Except for trace amounts, the tremolite which is predominately non-fibrous is removed from the vermiculite during processing.

In an effort to assure that this product is high purity, the supplier has retained the services of an outside independent laboratory. This laboratory has analyzed samples using state-of-the-art electron microscopy at 10,000x. Using this technique, no fibrous tremolite has been detected.

Quartz: This product can contain quartz (Crystalline Silica). Quartz is a naturally occurring mineral that is commonly contained in materials that are mined from the earth's surface such as sand, limestone, clay and gypsum. Quartz is represented by the combined fractions of non-respirable sized particles and of respirable sized particles (less than ten microns in aerodynamic diameter). Respirable sized quartz has been tied to more serious health effects (silicosis and lung cancer). The supplier has not been able to detect any respirable sized quartz in Microlite Vermiculite Dispersion based on industrial hygiene sampling conducted during spray drying of the material. Due to the high volume of product handled, they believe the highest potential for exposure existed during this process. In addition, this product when sold to their customers is in a liquid state which further decreases the potential for exposure to any respirable sized dusts.

In addition, a wet sieving analysis combined with x-ray diffractometry has been conducted on Microlite Vermiculite Dispersion. Results indicate that respirable quartz is not present above the 0.1% by weight limit established by the Occupational Safety and Health Administration (OSHA) for carcinogens and in fact is below the limits of detection for the analysis. OSHA states that if the hazardous substance is contained in the product below 0.1% by weight and if exposures do not exceed permissible exposure limits then the hazards do not apply.