

MATERIAL SAFETY DATA SHEET

Date 12/11/00

SECTION I - MANUFACTURER'S INFORMATION

NAME: Norfab Corp. PRODUCT: BASE MATERIAL:
ADDRESS: 1032 Stanbridge St. Series 400; Fabric
Norristown, PA 19404 COATING: Aluminized
TELEPHONE: 610-277-6100 polyester laminate

Series 400 products are heat resistant synthetic textiles. They consist of predominantly aramid fibers sometimes blended with a small percentage of other synthetic fibers wrapped around a fiberglass core. An aluminized polyester film is laminated to one side.

SECTION II - OSHA HAZARDOUS SUBSTANCES

<u>COMPONENT</u>	<u>CAS NO.</u>	<u>ACGIH TLV</u> (8-hr TWA)	<u>OSHA PEL</u> (8-hr TWA)
<u>Fiberglass</u> Nonrespirable	65997-17-3	5 mg/m ³ , Inhalable fraction	15 mg/m ³ , total dust
Respirable Respirable particulate with fiber like dimensions (glass shards)		3 mg/m ³ , PNOC NE	5 mg/m ³ , respirable 1 fiber/cc; aspect ratio >5:1

TWA – time weighted average; PNOR – particles not otherwise classified
NE – none established

SECTION III - PHYSICAL DATA

Boiling Point: N/A Specific Gravity (water=1): N/A
Melting Point: N/A Vapor Density: N/A
Percent Volatile: N/A Vapor Pressure: N/A
Solubility in Water: Insoluble Evaporation Rate: N/A
APPEARANCE AND ODOR: Base fabric – Yellow to yellow brown; Laminate – Aluminum; 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, chemical foam, dry chemical, CO₂, and/or smother.
SPECIAL FIRE FIGHTING INSTRUCTIONS: Use self-contained breathing apparatus to protect against hazardous decomposition products when this product is exposed to temperatures above 400°F (204°C).
UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: Inhalation, skin, eye

HEALTH HAZARDS:

ACUTE: Possible mechanical irritation accompanied by itching or dermatitis.

CHRONIC: None known.

HEALTH HAZARD EVALUATION

Norfab 400 series products are believed to be safe for their intended use. Each of the synthetic fibers in the blend has been evaluated for health hazards by the manufacturer of the fiber. Their information indicates that the fibers are not toxic or irritating based on animal and some human skin test data.

The core of the yarn is fiberglass. Since the fiberglass is imbedded in the fabric, it is not expected to present a hazard to anyone wearing or using an article made from the fabric. However, in cutting, sewing, or other mechanical operation, some fiberglass dust could be released.

One of the health questions about textile glass fiber is whether or not it can cause cancer in people. The diameter of these continuous filament fibers make them too large to be inhaled into the lungs by people. **No health authority has found, and no test has shown, that glass textile fibers cause cancer in people.** As a result of these findings, the World Health Organization and other authoritative bodies do not classify textile glass fiber as a carcinogen.

One of the reasons that people continue to have concerns about fiberglass and cancer are studies such as the 1997 study from the Institute of Occupational Medicine (IOM) in Edinburgh, Scotland. This study found that animals exposed to an extremely high dose of a durable E glass micro fiber, with average diameters less than 1 micron, developed lung scarring and tumors, including cancer of the lining of the lung (mesothelioma). The IOM study results are consistent with previously published research indicating that high doses of durable, fine diameter fibers can cause disease in experimental animals. Although our continuous filaments are an E glass, they are not the same as the E micro fibers tested in the IOM study. Our fiberglass supplier does not manufacture this micro fiber.

SECTION VI - EMERGENCY AND FIRST AID PROCEDURES

INHALATION: If irritation develops move to fresh air.

SKIN CONTACT: If fibers irritate the skin wash with soap and water.

EYE CONTACT: Flush eyes with water for 15 minutes or until fibers are removed.

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 occupational exposure limits (See Section II).

RESPIRATORY PROTECTION: A properly fitted NIOSH/MHSA approved dust respirator should be used when: 1) the level of dust in the air exceeds occupational exposure limits (See Section II); 2) 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: 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. Skin irritation from fiberglass is known to occur at pressure points such as around neck, wrist, waist, and fingers.

WORK AND 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, can 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.
- Use vacuum equipment to clean work surfaces.

SECTION VIII - REACTIVITY DATA

STABILITY: Product is stable.

INCOMPATIBILITY: None reasonably foreseeable.

HAZARDOUS DECOMPOSITION PRODUCTS: Base fabric will decompose above 570°F (300°C) producing CO₂, CO, small amounts of Hydrogen Cyanide, and other toxic gases depending on conditions. Decomposition gases from aluminized polyester and the lamination adhesive will be produced at temperatures in excess of 400°F (204°C). Avoid inhalation of decomposition gases.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION IX - STORAGE PRECAUTIONS

N/A

SECTION X- ENVIRONMENTAL PROTECTION

SPILLS: N/A

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