MATERIAL SAFETY DATA SHEET

Date 3/4/08

SECTION I - MANUFACTURER'S INFORMATION

NAME: Norfab Corp.
ADDRESS: 1032 Stanbridge St.
Norristown, PA 19404
TELEPHONE: 610- 277-6100

PRODUCT: OMNI Elite
Base Fabric: Blend of heat resistant synthetic textiles
Dye: brown
Coating: No. 51; water repellant finish

OMNI Elite is a blend Basofil ® (Melamine), Kevlar (para-aramid fibers),and PBO (Polybenzoxazole) fibers.

SECTION II - OSHA HAZARDOUS SUBSTANCES

Components are proprietary, non hazardous, and/or present at amounts below reportable limits.

COMPONENT	CAS NO.	ACGIH TLV (8-hr TWA)	OSHA PEL (8-hr TWA)
Particulates not otherwise classified (PNOC)			
Non-respirable		10 mg/m^3	15 mg/m^3
Respirable		3 mg/m^3	5 mg/m^3
Fiber Exposure Limit		Manufacturers Acceptable Limit	
Non-respirable		5 fibers/cc	
Respirable		2 fibers/cc	
Dye, Coating	Proprietary		

SECTION III - PHYSICAL DATA

Boiling Point: N/A
Melting Point: N/A
Percent Volatile: N/A
Solubility in Water: Insoluble
Specific Gravity (water=1): N/A
Vapor Density: N/A
Vapor Pressure: N/A
Evaporation Rate: N/A
Appearance and Odor: Base fabric – brown; no odor

SECTION IV - FIRE AND EXPLOSION DATA

Flash Point: N/A
Auto Ignition Temp: N/A
Flammability Limits: Fibers are inherently flame resistant, but can be ignited (LOI=29)
Extinguishing Media: Water, foam, dry chemical, CO2
Special Fire Fighting Instructions: Use self-contained breathing apparatus to protect against hazardous decomposition products when this product is exposed to temperatures above 370°C (700°F).
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. Possible upper respiratory irritation.

Chronic: Mechanical operations performed on this product could generate respirable fibers which, when breathed at very high concentrations repeatedly over long periods of time, may cause lung injury.

Health Hazard Evaluation

OMNI Elite products are believed to be safe for their intended use.

Fibers

Each of the synthetic fibers in the blend has been evaluated for health hazards by the manufacturer of the fiber. Mechanical operations such as cutting, or sewing could generate respirable fibrils. Animal studies indicate that prolonged overexposure to such fibrils has the potential for lasting lung damage. Other non-respirable fibers can be generated during mechanical operations which could cause upper respiratory irritation and cold-like symptoms.

Formaldehyde

Included at the end of this MSDS is a study of formaldehyde offgassing of various firefighters turnout gear.

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.

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

- Remove dust and fibers from the skin after exposure.
- Use vacuum equipment to remove fibers and dust from clothing. A lint removal brush can be helpful.
- 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 370°C (700°F) producing CO2, CO, oxides of nitrogen and sulfur, and small amounts of hydrogen cyanide, hydrogen chloride, ammonia, aldehydes, aliphatic hydrocarbons, and other toxic gases depending on conditions. Avoid inhalation of decomposition gases.

Hazardous Polymerization: Will not occur.

SECTION IX - STORAGE AND HANDLING

During prolonged storage at high temperature and high humidity, it is possible that extremely low levels of formaldehyde (measured in parts per billion) can be released: however, it is the manufacturer's experience that these levels are still well below the most stringent American Conference of Governmental Industrial Hygienist's recommended ceiling exposure limit of 0.3 ppm.

SECTION X- ENVIRONMENTAL PROTECTION

SPILLS: N/A

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

[BASOFIL® FIBER AND FORMALDEHYDE OFFGASSING]

Safety is our first concern. Since the early development stages of Basofil® Heat & Flame Resistant Fiber, BASF has been committed to creating a product that keeps safety at the forefront. That commitment includes the production processes used in manufacturing the fiber itself as well as the end use turnout gear worn by fire-fighters who dedicate their very lives to protect the safety of others.

Lately some concerns have been raised about formaldehyde off-gassing when fire fighting outer shells are exposed to intense heat. Even though formaldehyde is used in making Basofil fiber, actual off-gassing and smoke generation are minimal. In the manufacture of commercial aircraft seats, strict standards must be adhered to...and in 40% of those seats made in the US, Basofil fiber is a major component. Basofil fiber earned the confidence of Boeing and Airbus in such a critical application because it falls significantly below the required maximum level for toxic gas evolution. And the same is true for fire fighting turnout gear.

Tests were performed at the Dayton Fire Training Academy.

To address the formaldehyde safety concern in turnout gear, a controlled test was conducted on five commonly used turnout ensembles in the industry (*from left, Nomex III®A, Omni 45™ made with Basofil® Fiber, PBI Gold, Nomex Omega® and Advance™*). The test protocol represented a "worst case structural fire fighting scenario". The test was conducted with fire-fighters in a fire training burn room facility to simulate real life conditions and assure realistic results.

Basofil
heat & flame resistant fiber

800-216-3640
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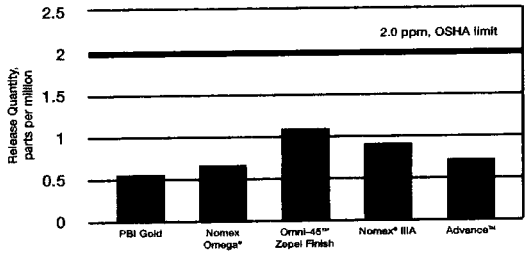
The "worst case scenarios" involved outershell fabric surface temperatures as high as 500°F in the burn room and burn room exposures lasting as long as 6 minutes. As the firefighter exited the building, formaldehyde analysis badges were immediately placed on the fabric (active side toward the fabric) and exposed for 15 minutes. While the badges were in contact with the fabric, the coats were removed and wrapped around the badge to prevent any airflow from disturbing the air around the analysis badge.

The Occupational Safety and Health Administration (OSHA), which regulates formaldehyde exposures in the industrial workplace, requires that the maximum safe short-term exposure limit (STEL) for a 15 minute exposure to formaldehyde is 2 parts per million (ppm).

AVERAGE FORMALDEHYDE RELEASE OF VARIOUS ENSEMBLES



*Omni-45, made with Basofil® Fiber, is now available with a new improved finish (Hypel) with lower potential formaldehyde release.

The formaldehyde release results obtained from the badges on the suit coats are shown in the chart, which demonstrates that:

- *all ensembles are well below 2 ppm;*
- *no significant difference exists between the ensembles.*

This study indicates that even under the worst case scenario conditions of a realistic structural fire fighting test, firefighters would not be exposed to unsafe levels of formaldehyde due to outgassing from their turnout suits. Note that although there is variation between the five fabric types, all suits are safe and well below the OSHA limit. Even though this "issue" is not a safety concern for the fire service industry, fire smoke *can* contain formaldehyde or other chemicals. For this reason, NFPA 1500 and 1410 mandate the use of SCBAs for firefighter safety.

[REST ASSURED THAT YOUR TURNOUT GEAR IS PROTECTING YOU.]

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