Carcinogenicity:

COMPONENT	NTP	IARC	OSHA
PAN (Acrylic) fibers, Glass fibers both non respirable	No	3	No
Alumina (non fibrous), Aluminum granules , Graphite, Iron oxide	No	No	No

Symptoms and Effects of Exposure to Selected Individual Components

ACRYLONITRILE POLYMER FIBERS (P.A.N. Fibers) (> 9 microns in diameter, considered non-respirable)
Inhalation hazard(s) – Overexposure to respirable fibers by inhalation may cause mild and temporary upper respiratory irritation, with discomfort or cough. The toxicological properties of this material have not been fully investigated. The oral and dermal animal testing LD_{50} values were greater than 5.0 g/kg and 2.0 g/kg, respectively.
Other hazard(s) – Skin sensitization has not been observed in human tests. The mechanical action of fibers may cause slight skin irritation at clothing binding points and mild irritation of the eyes and nasal passages.

ALUMINUM (GRANULES > 100 microns) and ALUMINUM OXIDE (non fibrous)
Inhalation hazard(s)- Exposure to alumina may cause coughing and shortness of breath.
Chronic: Prolonged exposure may affect breathing capacity.
Other hazard(s) – Ingestion is not recommended, but adverse affects have not been reported, Alumina is not absorbed through the skin, but contact may cause abrasion. Dust may irritate eyes.

GLASS FIBERS (>9 microns in diameter, considered non-respirable)
Inhalation hazard(s) – Continuous filament fibrous glass is a mechanical irritant. Breathing dusts and fibers may cause short-term irritation of the mouth, nose and throat. Long-term breathing or skin conditions that are aggravated by mechanical irritants may be at a higher risk of worsening from use or contact with this product.
Other hazard(s) – Skin contact with dust and fibers may cause itching and short-term irritation. Ingestion may cause short-term mechanical irritation of the stomach and intestines.

GRAPHITE
Inhalation hazard(s) –Acute: Exposure may result in cough, dyspnea, black sputum and fibrosis.
Chronic: Prolonged exposure may cause pneumoconiosis. It is reported that diseases of the respiratory and cardiovascular system may be aggravated by exposure.

IRON DUST (IRON OXIDE)
Inhalation hazard(s) –Repeated or prolonged exposures to iron dust may cause a form of benign pneumoconiosis called siderosis. Exposure is generally not associated with pulmonary fibrosis or disability unless there is concurrent exposure to other fibrosis- producing materials such as silica.
Other hazard(s) – Contact may cause shin and eye irritation

SECTION 4: FIRST AID MEASURES

Ingestion: Seek medical attention.

Inhalation: Move to fresh air. Seek medical attention.

Eye Contact: Flush with water to remove particulate. Seek medical attention.

Skin Contact: Wash thoroughly with soap and water. If persistent irritation develops, seek medical attention.

Revised 9/18/2006 Corrected Chemical nature of PAN fiber