MATERIAL SAFETY DATA SHEET
CarbonX®

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Product Description:

CarbonX® is a patented blend of oxidized polyacrylonitrile and other strengthening fibers that are inherently nonflammable. CarbonX® is available in yarn, knit and woven fabrics as well as non-woven felts. CarbonX does not melt or char and will not support combustion in air.

Hazardous Ingredients

Fibers are not classified as hazardous according to 29 CFR 1910.1200 (OSHA). Nuisance dust may be generated which can cause eye, skin or respiratory irritation. If additives are added to fibers, yarns, knits, wovens or non-wovens, separate MSDS sheets must be classified.

Physical and Chemical Characteristics

Product Form: yarn, fabric, felt

Appearance: black, dark green, dark blue

Odor: none

Typical Density: 1.4gm/cm3

Physical Hazards

Unusual Fire Hazard:

Although CarbonX® does not burn, exposure to temperatures in excess of 570ºF (300ºC) can result in the production of the following gases: nitrogen-containing products; NH3 (ammonia), HCN (hydrogen cyanide), N2, and monomeric acrylonitrile. Off-gas volume depends on temperature and duration of exposure.

If 0.33 lbs of CarbonX were converted into the maximum HCN that it could produce at temperatures up to 2700F, then such a quantity of CarbonX could in theory produce 2.2 mL of HCN. For example; the limits in the German workplace are 10mL/m3 (or 10 ppm) in an 8-hour exposure period.

The amount of off-gas of HCN in moderate to extreme heat and flame environments is expected to be well within any published tolerances of off-gas. CarbonX will only produce off-gas when directly exposed to extreme heat and flame consistent a flash fire event.

Electrical Hazards: CarbonX® is oxidized not carbonized and therefore is not electrically conductive. Exposure of CarbonX® to temperatures above 570ºF may cause carbonization and render it electrically conductive.

Reactivity Data

Stability: Stable

Hazardous Products: Hydrogen Cyanide (HCN)

Hazardous Polymerization: Will not occur.

Materials to avoid: None known.

Health Hazards

Exposure Limits: Treat particulates as a nuisance dust. Recommended TLV is 10 mg/m3 (total dust) and 5 mg/m3 (respirable dust).

Ingestion (swallowing): Chemically inert; no known hazard.

Inhalation (breathing): Dust may produce mechanical irritation to the mucous membranes of the nose, throat and upper respiratory tract.

Skin Contact: Mechanical irritation accompanied by itching or dermatitis may occur from exposure to loose particles of fibers.

Eye Contact: Particulates may cause eye irritation.

First Aid & Emergency Procedures: If product irritates skin, wash area with mild soap and water. If particles get in eyes, flush with plenty of water for several minutes. If skin, eye or respiratory irritation persists, seek medical attention promptly.

Waste Disposal Methods

Do not incinerate. Waste material should be bagged or containerized, sealed and disposed of in an approved landfill in accordance with federal, state and local regulation. Product is not considered a hazardous waste under current RCRA regulations.

Special Protection Information

Respiratory Production: When dust concentration exceeds recommended TLV of 10 mg/m3 (total dust) or 5 mg/m3 (respirable dust) wear NIOSH approved particulate respirator.

Local Exhaust: Recommended when appropriate to control employee exposure.

Mechanical (General) Ventilation: May not be adequate as the sole means of controlling dust or lint.

Hand Protection: Wear textiles gloves.

Eye Protection: Wear safety goggles if dust or lint is present.

Other Protective Measures: Wear long sleeve shirt and wash work clothing frequently. Wash exposed skin areas before eating and at end of work day. Use good housekeeping practices to keep work area free of dust and fibers.