Product: Friction Materials - Non Hazardous, with SARA reportable: Copper and Zinc (metal, alloys & compounds)

Symptoms and Effects of Exposure to Selected Individual Components (continued)

IRON CHROMITE (Note is a trivalent chromium compound).

Inhalation hazard(s) Negligible

Other hazard(s) $-\dot{LD}_{50}$ (oral) >10g/kg. IRAC states "Chromite ore has been extensively tested in rats by intrabronchial, intrapleural and intrafemoral administration; no increase in the incidence of tumors was seen." Chromite ore is not explicitly listed by NTP, but the text, under "chromium and certain chromium compound" States: "Injection- site sarcomas were produced in rats and mice after intramuscular, intrapleural and subcutaneous injections of chromite ore.... "

KYANITE (Naturally occurring stiochiometric oxide, 3Al₂O₃: 2SiO₂)).

Inhalation hazard(s) May contain naturally occurring trace amounts of crystalline silica. Long term exposure may aggravate pre-existing respiratory conditions and may cause pneumoconiosis (kaolinosis). Other hazard(s) – May irritate eyes and abrade the skin.

LIME (Hydrated, Calcium hydroxide)

Inhalation hazard(s) – Dust may cause irritation of nasal and respiratory passages.

Other hazards – Lime is a strong eye irritant, and may cause corrosive damage and blindness. Exposure to dust may cause severe skin irritation, drying, and burning, particularly to damaged skin. Swallowing excessive amounts may damage mucous membranes and the digestive system. There are no known chronic hazards.

LITHIUM POTASSIUM TITANIUM OXIDE

Inhalation hazard(s) -

Other hazard(s)

MICA

Inhalation hazard(s) –Thin amber flakes that are odorless. Long-term exposure to a respirable airborne concentration exceeding the TLV may lead to pneumoconiosis, but usually no functional lung impairment. The symptoms most frequently reported are chronic cough and dyspnea. May contain naturally occurring trace amounts of crystalline silica.

MAN-MADE MINERAL FIBERS – (SYNTHETIC VITREOUS FIBERS)

Inhalation hazard(s) – Exposure to respirable fibers by inhalation may cause temporary upper respiratory irritation, with discomfort and cough. Prolonged exposure may cause chronic lung disease. IARC has classified the man-made mineral fibers in these products as Group 3. ACGIH classifies synthetic vitreous fibers as A3, an animal carcinogen with unknown relevance to humans.

Other hazard(s) – The mechanical action of fibers may cause skin irritation and irritation of the eyes and nasal passages. Ingestion may cause gastrointestinal irritation, vomiting, and diarrhea.

Note: The emergence of "bio-soluble" forms of man-made fibers has allowed these fiber types to be omitted from classification as a carcinogen according to Note Q in EU Commission Directive 97/69/EC.

MULLITE (manufactured, see kyanite above, no excess silica)

MOLYBDENUM SULFIDE

Inhalation hazard(s) – Causes lung irritation, chest pain, difficult breathing and coughing. Other hazards – Nausea, stomach irritation, vomiting and minor irritation to skin. May cause abrasive damage to outer eye surface.

Revised: new format (formulas & ingredients changed)