

DATE PREPARED: October 26, 2015

SUPERSEDES: July 16, 2012

SECTION 1 - CHEMICAL AND COMPANY IDENTIFICATION

PRODUCT NAME: **Thomson HS-3000M**

COMPANY NAME: **A.R. Thomson Group**

ADDRESS: 10030 - 31ST AVENUE, EDMONTON, AB T6N 1G4

PHONE NUMBER: (780) 450-8080 FAX (780) 463-2021

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This packing product consists of braided carbon fiber yarn, impregnated with polytetrafluoroethylene dispersion, water soluble lubricant and graphite; and coated with molybdenum disulfide.

Heating PTFE to temperatures in excess of 260° C can evolve toxic fluorine compounds. Additional information concerning PTFE is available in the "Guide to the Safe Handling of Fluoropolymer Resins" published by the Fluoropolymers Division of the Society of the Plastics Industry, Inc...

Excessive levels of some constituents can cause lung and respiratory tract disorders, including irritation, pneumoconiosis, and cancer. These effects generally occur as a result of long term (months, years) exposures to high dust levels. Maintain dust concentrations at low levels.

PRODUCT CONSTITUENTS LISTED AS CARCINOGENS

Silica, Crystalline, IARC Group 1 (sufficient evidence of carcinogenicity in humans)

IARC

Yes

OSHA

No

NTP

Yes

POTENTIAL HEALTH EFFECTS

Primary Routes of Entry:

Inhalation of dusts or fumes from thermal decomposition. Dermal and ocular contact.

Acute Effects of Overexposure:

If exposed to thermal decomposition products of the polytetrafluoroethylene, temporary symptoms of polymer fume fever, a temporary flu-like illness with chills, fever, and sometimes cough, of approximately 24 hours duration. There are some reports in the literature of persistent pulmonary effects in individuals, especially

smokers, who have repeated episodes of polymer fume fever. Because of complicating factors, such as mixed exposures and smoking history, these findings are uncertain.

Small amounts of carbonyl fluoride and hydrogen fluoride may also be evolved when PTFE is overheated or burned.

Inhalation of low concentrations of hydrogen fluoride can initially include symptoms of choking, coughing and severe eye, nose and throat irritation. Possibly followed after a symptom less period of 1 to 2 days by fever, chills and difficulty breathing, cyanosis, and pulmonary edema. Acute or chronic over exposure to hydrogen fluoride can injure the liver and kidneys.

Inhalation, ingestion, or skin contact with carbonyl fluoride may initially include: skin irritation with discomfort or rash; eye corrosion with corneal or conjunctival ulceration; irritation of upper respiratory passages; or temporary lung irritation effects with cough, discomfort, difficulty breathing, or shortness of breath.

High concentrations of dusts may be irritating to the eyes, skin, mucous membranes and respiratory tract.

Chronic Effects Of Overexposure:

Respiratory and lung disorders may result if exposed to prolonged and repeated elevated dust levels.

Conditions Aggravated by Exposure:

Individuals with pre-existing diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures from thermal decomposition products or dusts.

SECTION 3 - COMPOSITION AND INFORMATION ON HAZARDOUS INGREDIENTS

| COMPONENT NAME | CAS NUMBER | % WT. (Optional) |
|---|------------|------------------|
| Polytetrafluoroethylene (PTFE) | 9002-84-0 | |
| Polyethylene glycol trimethylnonyl ether | 60828-78-6 | |
| Alpha-butoxy-omega-hydroxy ethylene oxide propylene oxide copolymer | 9038-95-3 | |
| Graphite Powder | 7727-42-5 | |
| Molybdenum Disulfide | 1317-35-5 | |
| Silica, Crystalline | 14808-60-7 | < 0.5 |
| PAN Based Carbon Fiber | 7740-44-0 | |

SECTION 4 - FIRST AID MEASURES

Eyes: Flush the eyes with water for a least 15 minutes. Do not rub eyes. Get medical attention if necessary.

Skin: Wash contaminated skin thoroughly with soap or mild detergent. Get medical attention if irritation persists. Dermatitis should be treated symptomatically by a physician.

Ingestion: Not a probable route. May cause gastro-intestinal distress following accidental ingestion. Consult a physician immediately.

Inhalation: No adverse effects are anticipated by breathing small amounts during normal and intended use. If exposed to high dust levels, then remove to fresh air. Drink water and clear throat. Blow nose to clear dust. If exposed to fumes from overheating or combustion, move to fresh air. Consult physician if symptoms persist.

SECTION 5 - FIRE FIGHTING MEASURES

| | |
|-------------------------------------|-------------------------------|
| Flash Point: Not Applicable | Method: Not Applicable |
| Upper Flammable Limit (UFL): | Not Applicable |
| Lower Flammable Limit (LFL): | Not Applicable |
| Autoignition Temperature: | Not Determined |

Hazardous Products of Combustion

Composition of by-products from the result of a fire or thermal decomposition will vary depending on the specific conditions. Hazardous gases/vapors could include smoke, oxides of sulfur and molybdenum, hydrogen sulfide, hydrogen fluoride, carbonyl fluoride, perfluorocarbon olefins, and carbon monoxide. There may be others unknown to us.

Fire fighting Instructions

As in any fire, use a self-contained breathing apparatus (SCBA) in the pressure-demand mode in conjunction with suitable gloves and clothing.

Extinguishing Media

Water, carbon dioxide, foam, or dry chemical. Be sure to use fire extinguisher appropriate to surrounding fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released or Spilled

Shovel or sweep up. Material should be placed in DOT approved containers for disposal.

SECTION 7 - HANDLING AND STORAGE

Handling

Decomposition products may be toxic.

Dust generated from this material must be managed by wet wiping or vacuuming with HEPA filtration equipped vacuum cleaners. Do not dry sweep or blow dust with compressed air.

Accumulations of dusts may cause shorting of electrical circuits and switches that may be affected. Dust should not be emitted to the atmosphere where they may settle on and cause shorting of outside electrical equipment. Personnel involved with handling this product should be wearing appropriate personal protective equipment as outlined in section 8.

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Work / Hygienic Practices

Personnel should avoid contaminating cigarettes or tobacco with particles of PFFE.

Storage

Store in labeled closed containers and away open flames & other sources of ignition. Do not store with or near incompatible materials cited in section 10.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

Engineering Controls

Ventilation: No special requirements for normal conditions of use.

Personal Protective Equipment

Eyes and Face: As generally good practice, safety glasses with side shields are recommended when handling this product to prevent eye contact with particulate matter.

Skin: Use of impervious gloves is recommended.

Respiratory: No special requirements under normal conditions of use.

| EXPOSURE GUIDELINES Component | (8 Hr. TWA) OSHA PEL | (8 Hr. TWA) ACGIH TLV |
|---|--|--|
| Polytetrafluoroethylene | None Established | None Established |
| Alpha-butoxy-omega-hydroxy ethylene oxide propylene oxide copolymer | None Established | None Established |
| Polyethylene glycol trimethylnonyl ether | None Established | None Established |
| Molybdenum Disulfide | 15.0 mg/m ³ | 10.0 mg/m ³ |
| Graphite | 2.0 mg/m ³ (respirable dust) | 2.0 mg/m ³ (respirable dust) |
| Silica, Crystalline (Quartz) | 10 mg/m ³ / %SiO ₂ + 2 (resp) | 0.025 mg/m ³ (resp) |
| 30 mg/m ³ / %SiO ₂ + 2 (total) | | |
| PAN Based Carbon Fiber | 15.0 mg/m ³ (total dust) 5.0 mg/m ³ (respirable dust) | 10.0 mg/m ³ (total dust) 3.0 mg/m ³ (respirable dust) |

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|------------------------|----------------------------------|-------------------------------|--|
| Appearance: | Black braid or die formed rings. | Boiling Point: | Not Applicable |
| Odor: | Slight odor | Freezing Point: | Not Applicable |
| VOC Content: | Not Applicable | Melting Point: | Not Applicable |
| pH: | Not Applicable | Solubility In Water: | Contains small quantities of residual water soluble surfactant |
| Vapor Pressure: | Not Applicable | Specific Gravity: | Not determined |
| Vapor Density: | Not Applicable | Reactivity with Water: | Non Reactive |

SECTION 10 - STABILITY AND REACTIVITY

Stability: The material is stable.

Hazardous Polymerization: Hazardous polymerization will not occur.

Conditions to avoid: Direct flame will ignite product.

Materials to avoid: Incompatible or can react with finely divided metal powders (e.g. aluminum and magnesium), molten alkali metals, strong oxidizers, acids and strong alkali. Contact with incompatibles can cause fire or explosion.

Hazardous Decomposition Products

Composition of by-products from the result of a fire or thermal decomposition will vary depending on the specific conditions. Hazardous gases/vapors could include smoke, oxides of sulfur and molybdenum, hydrogen sulfide, hydrogen fluoride, carbonyl fluoride, perfluorocarbon olefins, and carbon monoxide. There may be others unknown to us.

SECTION 11 TOXICOLOGICAL INFORMATION

Toxicity data is available on the individual components. Call (780) 450-8080 for information.

SECTION 12 - ECOLOGICAL INFORMATION

None available for this product.

SECTION 13 - DISPOSAL INFORMATION

Dispose of in accordance with local, state, and federal regulations. Land fill is normally recommended.

SECTION 14 - TRANSPORTATION INFORMATION

D.O.T. Shipping Name: Not Regulated

SECTION 15 - REGULATORY INFORMATION

Warning, this product contains a mineral known to the state of California to cause cancer, birth defects or reproductive harm.

- Tetrafluoroethylene
- Dioxane (< 0.5 ppm)
- Ethylene Oxide (< 2 ppm)
- Acetaldehyde (< 1 ppm)
- Formaldehyde (< 0.5 ppm)
- Crystalline Silica

States such as Pennsylvania, New Jersey, Vermont, Massachusetts, and Rhode Island may also have specific requirements relative to component in this product; consult specific state regulatory requirements for additional information.

SECTION 16 - OTHER INFORMATION

This MSDS is prepared to safeguard the health of workers and to comply with the requirements of 29CFR 1910.1200. Consult your employer before working with this material.

DISCLAIMER

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, storage, transportation and release and is not considered a warranty or quality specification. The responsibility for the compliance with existing law and regulations lies with the receiver of the product.

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