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SECTION 1 CHEMICAL AND COMPANY IDENTIFICATION

PRODUCT NAME: **Thomson ULTRA PAK**

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 product is a lattice braided packing which contains both Graphitized Carbon Yarn and Yarn consisting of Flexible Graphite reinforced with Glass Fiber. The product also contains a proprietary blocking agent which contains Polytetrafluoroethylene and is 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, also identified by NTP as a carcinogen.
- Fiber Glass Continuous Filament: IARC Group 3 (Not classifiable as to its carcinogenicity to humans). The International Agency for Research on Cancer (IARC 2002) concluded that epidemiologic studies published since the previous IARC (1988) assessment provided no evidence of increased risks of lung cancer or of mesothelioma from occupational exposure during the manufacture of man-made vitreous fibers and inadequate evidence overall of any excess cancer risk.
- The U.S. Department of Health and Human Services, National Toxicology Program (NTP 1998, 2000, 2002) classified glass wool (respirable size) as reasonably anticipated to be a human carcinogen, based on sufficient evidence of carcinogenicity in experimental animals. This assessment was originally prepared in 1993–1994 for the 7th Report on Carcinogens (NTP 1994), but has not been updated since then in the 8th, 9th, or 10th Reports on Carcinogens (NTP 1998, 2000, 2002). Continuous filament glass, rock wool, slag wool, or refractory ceramic fibers were not listed or assessed for carcinogenicity in the 7th, 8th, 9th, or 10th Report on Carcinogens (NTP 1994, 1998, 2000, 2002).

Potential Health Effects

Under normal and intended use conditions it is not anticipated that dust levels sufficient to cause symptoms or adverse health effects will be produced.

Primary Routes of Entry:

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

Target Organs:

Prolonged and repeated overexposure can cause pulmonary disorders.

Acute Effects of Overexposure:

High concentrations of dusts may be irritating to the eyes, skin, mucous membranes and respiratory tract. If exposed to thermal decomposition products of the Polytetrafluoroethylene, temporary symptoms of polymer fume fever (chills, fever, cough and malaise).

Chronic Effects of Overexposure:

Pulmonary disorders can result when exposed to prolonged and repeated elevated dust levels.

Conditions Aggravated by Exposure:

Individuals with pre-existing respiratory and lung diseases may have increased susceptibility to the toxicity of excessive exposure to decomposition products.

SECTION 3 COMPOSITION AND INFORMATION ON INGREDIENTS

COMPONENT NAME	CAS NUMBER	% WT (Optional)
Polyethylene glycol trimethylnonyl ether	60828-78-6	
Graphite	7727-42-5	
Continuous Fibrous Glass	65997-17-3	
Molybdenum Disulfide	1317-33-5	
Polytetrafluoroethylene	9002-84-0	
Carbon Fiber	7440-44-0	
Silica, Crystalline	14808-60-7	< 0.5

SECTION 4 FIRST AID MEASURES

Eyes: Flush the eyes with water for 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: 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.

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 Applicable

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 include smoke, oxides of sulfur, 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 full protective gear.

Extinguishing Media

Carbon dioxide, water, or ABC dry chemical. Be sure to use fire extinguisher appropriate to surrounding fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES**Small Spill**

No special precautions are necessary where packing is intact and there is no substantial product dust generated. For any small amounts of dust, wet wipe and dispose.

Large Spill

If substantial amounts of dust are present as the result of a physical disturbance which disrupts the matrix of the material, the material should first be lightly misted with water then vacuumed using a vacuum cleaner equipped with a High Efficiency Particulate Air (HEPA) filtration device.

SECTION 7 HANDLING AND STORAGE**Handling**

Dust generated from this material must be managed by wet wiping or vacuuming with HEPA filtration equipped vacuum cleaners. Personnel involved with handling this product should be wearing appropriate personal protective equipment as outlined in section 8.

Work / Hygienic Practices

Personnel should avoid contaminating cigarettes or tobacco with particles of PTFE. Do not eat or smoke in areas of storage or processing.

Storage

The product is stable under all conditions of storage.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

Engineering Controls

Ventilation:

Normal and intended use of this product should not produce material component levels in substantial airborne concentrations. In keeping with standard Industrial Hygiene practices, if exposure levels are not known, or if dust levels exceed the occupational exposure limits, then use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels to below recommended exposure limits. Maintain and test ventilation systems in accordance with OSHA regulations (29CFR 1910.94). Review OSHA 29CFR part 1910.1000 or 29CFR Part 1926 Subpart Z for exposure level information.

Personal Protective Equipment

Eyes and Face:

Special precautions are not normally necessary. If dust is generated, use American National Standards Institute (ANSI) approved eye and face protection when subjected to potential eye and face hazards.

Skin:

Use of impervious gloves is recommended.

Respiratory:

Normal intended use of this product should not produce material component levels in substantial concentrations. In keeping with standard Industrial Hygiene practices, if exposure levels are not known, or if the dust levels exceed occupational exposure limits and engineering controls cannot be used; then use the appropriate respiratory protection. Use a NIOSH approved air purifying respirator with an R100 or P100 (high efficiency) filter cartridge in accordance with OSHA respirator program requirements (29CFR 1910.134).

EXPOSURE GUIDELINES

Component	(8 Hr. TWA) OSHA PEL	(8 Hr. TWA) ACGIH TLV
Polytetrafluoroethylene	None Established	None Established
Carbon Fiber	15.0 mg/m ³ 5.0 mg/m ³ (Respirable Fraction)	2.0 mg/m ³
Graphite	2.0 mg/m ³ (respirable dust)	2.0 mg/m ³ (respirable dust)
Molybdenum Disulfide	10 mg/m ³ (total dust)	10 mg/m ³ (total dust)
Polyethylene glycoltrim ethylnonyl ether	None Established	None Established
Fibrous Glass		
Nonrespirable fibers and Particulate	15.0 mg/m ³ (total dust)	
Respirable Particulate	5.0 mg/m ³ (respirable dust)	
Respirable particulate with fiber like dimensions (glass shards)	None Established	
Silica, Crystalline (Quartz)	10 mg/m ³ / %SiO ₂ + 2 (resp) 30 mg/m ³ / %SiO ₂ + 2 (total)	0.025 mg/m ³ (resp)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Grey /Black lattice braid	Boiling Point:	Not Applicable
Odor:	Faint hydrocarbon odor	Freezing Point:	Not Applicable
Physical State:	Solid	Melting Point:	327° C (PTFE)
pH:	Not Applicable	Solubility In Water:	< 1 %
Vapor Pressure:	Not Applicable	Specific Gravity:	Not determined

SECTION 10 STABILITY AND REACTIVITY**Stability**

The material is stable.

Hazardous Polymerization

Hazardous polymerization will not occur.

Conditions to avoid

Do not expose the material to direct flame.

Materials to avoid

Incompatible or can react with finely divided metal powders (e.g. aluminum and magnesium), molten alkali metals, and strong oxidizers. 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 include smoke, oxides of sulfur, 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

No ecological information is available on 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

DOT - Not Regulated

SECTION 15 REGULATORY INFORMATION

Warning, this product contains the following materials known to the state of California to cause cancer or reproductive effects:

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

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 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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