

DATE PREPARED: October 26, 2015

SUPERSEDES: July 16, 2012

## SECTION 1 CHEMICAL AND COMPANY IDENTIFICATION

 PRODUCT NAME: **Thomson TGBE, TGBR**

 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 HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	C.A.S. NO.
Expanded purified natural graphite	97-100	7782-42-5
Silica Sand (ash)	0-3	14808-60-7 (Quartz) 14464-46-1 (Cristobalite) 15468-32-3 (Tridymite)
Phosphoric Acid	0.0 – 0.5	7664-38-2
Sigraflex Grade APX2 contains a proprietary non-hazardous phosphorus compound.	--	Trade Secret

## SECTION 3 OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL:	Graphite (natural)	Silica	Phosphoric Acid
	15mppfc	(30 mg/m <sup>3</sup> )/SiO <sub>2</sub> +2), TWA, total dust  (10 mg/m <sup>3</sup> )/SiO <sub>2</sub> +2), TWA, respirable fraction where %SiO <sub>2</sub> is the percentage of crystalline silica determined by airborne samples, as defined by 29CFR 1910.1000, Z-3	1 mg/m <sup>3</sup>
<b>ACGIH TLV:</b>	10mg/m <sup>3</sup> as total nuisance particulate; 2 mg/m <sup>3</sup> as respirable fraction	0.025 mg/m <sup>3</sup> (TWA as quartz) 0.025 mg/m <sup>3</sup> (TWA as cristobalite)	1 mg/m <sup>3</sup> (TWA) 3 mg/m <sup>3</sup> (STEL)
<b>NIOSH:</b>	2.5 mg/m <sup>3</sup> as respirable fraction	0.05 mg/m <sup>3</sup> (TWA)	1 mg/m <sup>3</sup> (TWA) 3 mg/m <sup>3</sup> (STEL)

**SECTION 3 OCCUPATIONAL EXPOSURE LIMITS (Continued from page 1)**

<b>CARCINOGENICITY:</b>	<b>Graphite</b>			
	NTP: No	IARC: No	OSHA: No	WHMIS: No
	<b>Silica</b>			
	NTP: Yes – known carcinogen	IARC: Yes (Group 1)	OSHA: No	WHMIS: Yes (D2A)
	<b>Phosphoric Acid</b>			
	NTP: No	IARC: No	OSHA: No	WHMIS: No

Target Organs: Respiratory System, Cardiovascular System per NIOSH.

**SECTION 4 HEALTH HAZARDS**

**EFFECTS OF EXPOSURE**

**Primary Route of Exposure**

Inhalation of dusts generated during processing and handling, also dermal and ocular contact possible.

**EFFECTS OF OVEREXPOSURE**

**Acute:** High concentrations of graphite dust may be irritating to eyes, skin, mucous membranes, and respiratory tract.

**Chronic:** Prolonged or repeated overexposure to quartz dust may lead to pulmonary fibrosis, decreased pulmonary function and lung cancer. Inhalation of high concentration of graphite dust over prolonged periods of time may cause graphite pneumoconiosis. Symptoms can include cough, shortness of breath and decrease in pulmonary function.

Pre-existing pulmonary disorders such as emphysema may possibly be aggravated by prolonged exposure to high concentrations of graphite dust.

**Chronic Toxicity**

Respirable quartz dust particles can be inhaled and deposited in the lung. Silicosis, lung cancer and pulmonary tuberculosis are associated with occupational exposure to quartz dust. Short term experimental studies of rats have found that intratracheal instillation of quartz particles leads to the formation of discrete silicotic nodules in rats, mice and hamsters. Long term inhalation studies of rats and mice have shown that quartz particles produce cellular proliferation, nodule formation, suppressed immune functions and alveolar proteinosis. Experimental studies of rats reported the occurrence of adenocarcinomas and squamous cell carcinomas after the inhalation or intratracheal instillation of quartz.

## SECTION 5 EMPLOYEE PROTECTION

**Respiratory Protection:**

NIOSH approved respirator when the occupational exposure limits are exceeded.

**Eye Protection:**

Safety glasses with side shields and/or goggles recommended.

**Protective Gloves:**

Sensitive individuals should wear protective gloves.

**Other Protective Equipment:**

Protective coveralls recommended in atmospheres with high dust concentrations.

**Ventilation:**

Local exhaust ventilation recommended to maintain dust concentrations below the occupational exposure limits.

## SECTION 6 FIRST AID

**Skin Contact:**

Wash affected area with soap and water. If irritation develops, seek medical attention.

**Eye Contact:**

Flush eyes with plenty of water. If irritation develops, seek medical attention.

**Inhalation:**

If inhaled, remove to fresh air. Get medical attention, if symptoms persist.

## SECTION 7 FIRE AND EXPLOSION DATA

**Flash Point:** NA

**Flammable Limits:** N/A LEL \_\_\_\_\_ UEL \_\_\_\_\_

**Extinguishing Media:** Water, dry chemical, foam

**Unusual Fire and Explosion Hazards:** Accumulations of graphite dust may cause shorting of electrical circuits.

## SECTION 8 SPECIAL PRECAUTIONS

**Precautions for Handling and Storing:**

Sigraflex laminates may contain less than 1% adhesives. These adhesives, if uncured, may contain trace elements of solvents, such as phenol, acetone, or ethanol.

Sigraflex grades do not contain, and are not manufactured with any Class I or Class II ozone depleting substances.

## SECTION 9 ENVIRONMENTAL PROTECTION

**Spill or Leak Procedures:** Graphite dusts should be vacuumed to prevent accumulation.

**Waste Disposal Method:** Personnel performing clean-up of accumulated dusts should follow precautions listed in Section V. Natural graphite is not regulated by the Resource Conservation and Recovery Act (RCRA). State and local regulations should be verified prior to disposal of both the bulk material and graphite dust.

## SECTION 10 PHYSICAL DATA

<b>Boiling Point:</b> N/A	<b>Vapor Pressure(mm Hg):</b> N/A	<b>Spec. Gravity (H<sub>2</sub>O = 1):</b> 2.0
<b>Vapor Density (Air = 1):</b> N/A	<b>Evaporation Rate (_____ = 1):</b> N/A	<b>Solubility in Water:</b> Insoluble
<b>Percent Volatile by Volume:</b> 0.5	<b>Appearance:</b> Gray sheet	<b>Odor:</b> None

## SECTION 11 REACTIVITY DATA

**Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Conditions and Materials to Avoid:**

Strong oxidants; will oxidize slowly in air temperatures of 400°C or greater.

**Hazardous Decomposition Products:**

Graphite combustion produces carbon monoxide and carbon dioxide gases.

## SECTION 12 TRANSPORTATION

**DOT Transportation Classification:** Not Regulated

**IATA Transportation Classification:** Not Regulated

**IMDG Transportation Classification:** Not Regulated

## SECTION 13 REFERENCES

**OSHA:** 29 CFR 1910.1000, Table Z-1-A

**ACGIH:** Documentation of Threshold Limit Values - Current Edition