

**SAFETY DATA SHEET**

Quantum Technical Services Ltd.

**Section 1. Product and Company Identification**

Product Name	SafeCoat® TFI (Thin Film Intumescent) Structural Steel Protection
Manufacturer	Quantum Technical Services Ltd. (Db a Quantum Chemical) 15 Riel Drive St. Albert, AB, Canada T8N 3Z2 Tel: (780) 458-3355 (non-emergency phone number) Fax: (780) 458-2852 <a href="http://www.quantumchemical.com">www.quantumchemical.com</a>
Chemical Emergencies	For 24-Hour Emergency call Canutec at 613.996.6666

**Section 2. Hazards Identification****2.1 Classification**

**Regulatory Status:** This product contains a small amount of Titanium Dioxide which is considered possibly hazardous in its powder form. IARC lists TiO<sub>2</sub> powder as 2B “possibly carcinogenic to humans” when it is inhaled as dust. All TiO<sub>2</sub> in this product is dispersed in liquid.

**WHMIS** This product is not WHMIS regulated.

**2.2 Label Elements:**

**Pictogram:** None.  
**Signal Word:** None.  
**Hazard Statements:** None.  
**Precautionary Statements:** None.

**2.3 Other Hazards**

Route of Entry	Eye contact, skin contact, inhalation.
Eye Contact	Like any foreign body, particles can cause mechanical irritation.
Skin Contact	May cause transient reddening of the skin.
Skin Absorption	Not available.
Inhalation (Acute)	Inhalation of dust or mist can cause irritation of the eyes, nose, throat and lungs.
Ingestion	No evidence of adverse effects from available information.

**Section 3. Composition and Ingredient Information**

<u>Common Name</u>	<u>CAS No.</u>	<u>WT%</u>
Titanium Dioxide	13463-67-7	3 to 7%

No other hazardous ingredients.

## Section 4. First Aid Measures

Eye Contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Consult a physician if irritation continues.
Skin Contact	In case of contact, immediately flush skin with plenty of soap and water. Remove contaminated clothing. Wash clothing before reuse.
Inhalation	If inhaled, remove to fresh air. If individual is having difficulty breathing or respiratory irritation, seek medical attention.
Ingestion	Induce vomiting. Get medical attention.

## Section 5. Fire Fighting Measures

Flash Point	Non combustible.
Conditions of Flammability	None.
Auto Ignition Temperature (C)	Not applicable.
Upper Explosive Limit	Not applicable.
Lower Explosive Limit	Not applicable.
Extinguishing Media	Use extinguishing media for surrounding fire.
Hazardous Combustion Products	Oxides of carbon and nitrogen, hydrogen chloride, ammonia, phosphoric acid.
Sensitivity to Mechanical Impact	Not applicable.
Sensitivity to Static Discharge	Not Applicable.
Special Fire Fighting Procedures	Firefighters should wear positive pressure, full-face, self-contained breathing apparatus.

## Section 6. Accidental Release Measures

Leak/Spill	Small	Absorb liquid with paper, vermiculite, floor absorbent or other absorbent material.
	Large	Persons not wearing protective equipment should be excluded from area of spill until cleanup is completed. Stop spill at source. Dike to prevent spreading. Pump to salvage tank.

## Section 7. Handling and Storage

Handling Procedures	Avoid skin and eye contact. Avoid breathing dust. Remove contaminated clothing before reuse. Maintain a good personal hygiene.
Storage Needs	Keep from freezing. Storage temperature range minimum 10°C - maximum 35°C.

## Section 8. Exposure Controls and Personal Protection.

Protective Equipment	
Eye/Type	Wear safety glasses.
Respiratory/Type	If sprayed wear NIOSH/MSHA approved respirator.
Gloves/Type	Use gloves impervious to soap and water.
Ventilation Requirements	General room ventilation is expected to be satisfactory. Use local exhaust if needed to control mist or vapour.

### Exposure Limits to Titanium Dioxide (in powder form only)

**This information pertains to exposure to and inhalation of TiO<sub>2</sub> dust. In our opinion it does not apply to FireSheath Latex which has completely dispersed the TiO<sub>2</sub> into the liquid.**

PEL (OSHA)	15 mg/m <sup>3</sup>	8 hr TWA	Total Dust
TLV (ACGIH)	10 mg/m <sup>3</sup>	TWA	

## Section 9. Physical and Chemical Properties

Physical State	Liquid
Odor	mild odor.
Specific Gravity	1.405
Odor Threshold (ppm)	Not available.
Vapor Pressure (mm Hg)	17.5
Vapor Density (Air=1)	<1
Evaporation Rate	<1
Boiling Point	100°C
PH	Neutral
Freezing Point (deg C)	0
% Volatile	31%

## Section 10. Stability and Reactivity

Conditions of Instability	Stable under normal conditions
Incompatibility	No known materials
Reactivity Conditions	No special reactivity
Hazardous products of Decomposition	None expected

## Section 11. Toxicological Information

Carcinogenicity of TiO<sub>2</sub>

**This information pertains to exposure to and inhalation of TiO<sub>2</sub> dust. In our opinion it does not apply to this product which has completely dispersed the TiO<sub>2</sub> into the liquid.**

In lifetime inhalation studies, rats were exposed for 2 years to respectively 10, 50 and 250 mg/m<sup>3</sup> of respirable TiO<sub>2</sub>. Slight lung fibrosis was observed at 50 and 250 mg/m<sup>3</sup> levels. Microscopic lung tumours were also observed in 13 percent of the rats exposed to 250 mg/m<sup>3</sup>, an exposure level that caused lung overloading and impairment of rat lungs clearance mechanisms.

In further studies, these tumours were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. The pulmonary inflammatory response to TiO<sub>2</sub> particles exposure was also found to be much more severe in rats than in other rodent species.

In February 2006, IARC has re-evaluated Titanium dioxide pertaining to Group 2B: "possibly carcinogenic to humans", based upon inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide. IARC evaluation guidelines consider the generation of tumours, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence.

The conclusions of several epidemiology studies on more than 20000 TiO<sub>2</sub> industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO<sub>2</sub> dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO<sub>2</sub> dust.

## Section 12. Ecological Information

Not Known.

## Section 13. Disposal Considerations

Waste Disposal                      In accordance with municipal, provincial and federal regulations.

## Section 14. Transport Information

**DO NOT FREEZE.**

T.D.G. Classification              Non-regulated.

## Section 15. Regulatory Information

WHMIS Classification              Non-controlled.

NFPA Ratings	Health	1 (Slight)
	Fire	0 (Insignificant)
	Reactivity.	0 (Insignificant)

## Section 16. Other Information

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Prepared By:                        Quantum Technical Services Ltd.

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