

SAFETY DATA SHEET

Quantum Technical Services Ltd.

Section 1. Product and Company Identification

Product Name	SafeCoat® Steel
Manufacturer	Quantum Technical Services Ltd. (Dba Quantum Chemical) 15 Riel Drive St. Albert, AB, Canada T8N 3Z2 Tel: (780) 458-3355 (non-emergency phone number) Fax: (780) 458-2852 www.quantumchemical.com
Chemical Emergencies	For 24-Hour Emergency call Canutec at 613.996.6666

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

Regulatory Status: This product contains Titanium Dioxide which is considered possibly hazardous in its powder form. IARC lists TiO₂ powder as 2B “possibly carcinogenic to humans” when it is inhaled as dust. All TiO₂ in this product is dispersed in liquid.

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

Common Name	CAS No.	WT%
Titanium Dioxide	13463-67-7	10-30

Note: Concentration ranges are given to protect proprietary information.

No other hazardous ingredients above 1% concentration in this product.

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 TiO₂ dust. In our opinion it does not apply to FireSheath Latex which has completely dispersed the TiO₂ into the liquid.

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

Section 9. Physical and Chemical Properties

Physical State:	Liquid.
Odor:	Mild odor.
Specific Gravity:	1.51.
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 (°C):	0.
% Volatile (weight):	24.1%.

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 TiO₂

This information pertains to exposure to and inhalation of TiO₂ dust. In our opinion it does not apply to this product which has completely dispersed the TiO₂ into the liquid.

In lifetime inhalation studies, rats were exposed for 2 years to respectively 10, 50 and 250 mg/m³ of respirable TiO₂. Slight lung fibrosis was observed at 50 and 250 mg/m³ levels. Microscopic lung tumours were also observed in 13 percent of the rats exposed to 250 mg/m³, 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 TiO₂ 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 TiO₂ industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO₂ dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO₂ 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

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

Section 16. Other Information

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