

SAFETY DATA SHEET

Quantum Technical Services Ltd.

Section 1. Product and Company Identification

Product Name	SafeCoat® PVC
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 a small amount of 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, and is not inhalable.

This product contains a small amount of Carbon Black which is considered possibly hazardous in its powder form. IARC lists Carbon Black powder as 2B “possibly carcinogenic to humans” when it is inhaled as dust. All Carbon Black in this product is dispersed in liquid, and is not inhalable.

GHS Classification

Flammable Liquids	Cat. 2
Acute Toxicity- Oral	Cat. 5
Acute Toxicity - Inhalation	Cat. 5
Skin Corrosion/Irritation	Cat. 3
Serious Eye Damage/Irritation	Cat. 2A
Specific Target Organ Systemic Toxicity (single exposure)	Cat. 3 (narcotic effects)
Aspiration Hazard	Cat. 2

2.2 Label Elements:**Pictogram:****Signal Word:****Danger**

Hazard Statements:	H225	Highly flammable liquid and vapour.	
	H303	May be harmful if swallowed.	
	H305	May be harmful if swallowed and enters airways.	
	H316	Causes mild skin irritation.	
	H319	Causes serious eye irritation.	
	H333	May be harmful if inhaled.	
	H336	May cause drowsiness or dizziness.	
Precautionary Statements:			
Prevention	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	
	P233	Keep container tightly closed.	
	P240	Ground and bond container and receiving equipment.	
	P241	Use explosion-proof electrical/ventilating/lighting equipment.	
	P242	Use non-sparking tools.	
	P243	Take action to prevent static discharge.	
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.	
	P264	Wash hands thoroughly after handling.	
	P271	Use only outdoors or in a well-ventilated area.	
	P280	Wear protective gloves/protective clothing/eye protection/face protection.	
	Response	P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
		P370+P378	In case of fire: Use appropriate media to extinguish.
		P304+P312	IF INHALED: Call a POISON CENTER/doctor/physician if you feel unwell.
		P332+P313	If skin irritation occurs: Get medical advice/attention.
P305+P351+P338		IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P337+P313		If eye irritation persists: Get medical advice/attention.	
P304+P340		IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
Storage	P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.	
	P331	Do NOT induce vomiting.	
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.	
	P235	Keep cool.	
	P405	Store locked up.	
	Disposal	P501	Dispose of contents/container to appropriate waste or reclaimer in accordance with local and national regulations.

Section 3. Composition and Ingredient Information

<u>Common Name</u>	<u>CAS No.</u>	<u>WT%</u>
Methyl Ethyl Ketone	78-93-3	35-45
Ammonium Polyphosphate	68333-79-9	20-25
Titanium Dioxide	13463-67-7	4-6
Carbon Black	1333-86-4	0.3
Other non hazardous materials:		25

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. If redness, swelling, pain, and/or blisters occur, transport to the nearest medical facility for additional treatment.
Inhalation	If inhaled, remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Ingestion	If swallowed, do not induce vomiting, transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next six hours, transport to the nearest medical facility: fever greater than 101° F (38.3° C), shortness of breath, chest congestion or continued coughing or wheezing. Give nothing by mouth, do not induce vomiting.

Notes to Physician:

Most Important Symptoms/Effects Acute and Delayed.

Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and or blurred vision. Defatting dermatitis signs and symptoms may include a burning sensation, and/or a dried cracked appearance. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

Immediate Medical Attention, Special Treatment

Causes central nervous system depression. Call a Doctor or poison control center for guidance.

Section 5. Fire Fighting Measures

Specific Hazards	Containers exposed to intense heat from fires should be cooled with large quantities of water. The vapour is heavier than air, spreads along the ground and distant ignition is possible.
Extinguishing Media	Alcohol resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not discharge extinguishing waters into the aquatic environment.
Unsuitable Extinguishing Media	Do not use a water jet.
Protective Equipment for Fire Fighters	Wear full protective clothing and self-contained breathing apparatus.
Other Advice	Keep adjacent containers cool by spraying with water.

Section 6. Accidental Release Measures

Personal Precautions,
Protective Equipment, and
Emergency Procedures

Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low areas. Shut off leaks, if possible without personnel risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire-fighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.

Methods and Material for
Containment and Clean up.

For small liquid spills transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely.

Additional Advice

Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Vapour may form an explosive mixture with air.

Section 7. Handling and Storage

Handling

Avoid breathing vapours or contact with material. Use only in well-ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see section 8.

Storage

Must be stored in well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, and corrosives. The vapour is heavier than air. Beware of accumulation in pits and confined spaces.

Section 8. Exposure Controls and Personal Protection

Respiratory Protection

If engineering controls do not maintain airborne concentrations to an adequate level, select suitable respiratory protection. Use a NIOSH approved respirator with an organic vapour cartridge.

Eye Protection

Chemical splash goggles.

Hand Protection

Wear protective gloves, natural or butyl rubber for long term protection.

Exposure Limits for MEK

TWA	(ACGIH)	200 ppm
STEL	(ACGIH)	300 ppm

Exposure limits for Carbon Black and Titanium Dioxide are for respirable dust only; in our opinion these do not apply to this product where these products are fully dispersed in liquid.

Section 9. Physical and Chemical Properties

Physical State	Liquid.
Odor	Mild odor.
Specific Gravity	0.805
Odor Threshold (ppm)	200 ppm
Vapour Pressure (mm Hg @ 20 C)	77.5
Vapour Density (Air=1)	>1
Evaporation Rate	6
Boiling Point	79.6°C
Solubility in Water	Soluble in cold water.
PH	Not available.
Freezing Point (deg C)	Not available.
VOC	450 g/litre.

Section 10. Stability and Reactivity

Conditions of Instability	Stable under normal conditions.
Incompatibility	Keep away from peroxides, oxidizing agents, strong acids, amines.
Reactivity Conditions	Highly reactive with oxidizing agents and reducing agents. Slightly reactive to organic acids and alkalis.
Hazardous Products of Decomposition.	Carbon monoxide, carbon dioxide and other organic compounds will be evolved.

Section 11. Toxicological Information

Methyl Ethyl Ketone

Acute Toxicity	Acute Oral Toxicity	Low Toxicity LD50>2000 <5000 mg/kg (rat)
	Acute Dermal	LD50>5000 mg/kg (rabbit)
	Acute Inhalation	LC50>5000 ppm
Irritancy	Skin	Irritant
	Eyes	Irritant
	Respiratory System	Irritant
Sensitizing Capability	Not a skin sensitizer.	
Aspiration Hazard	Aspiration into lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.	
Germ Cell Mutagenicity	Not mutagenic.	
Reproductive and Developmental Toxicity	Not expected to impair fertility. Not a developmental toxicant.	
Carcinogenicity	No.	

Specific Target Organ Toxicity
Single exposure May cause drowsiness or dizziness.

Specific Target Organ Toxicity
Repeated Exposure Low systemic toxicity on repeated exposure.

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.

Carcinogenicity of Carbon Black

This product contains a small amount of Carbon Black which is considered possibly hazardous in its powder form. IARC lists Carbon Black powder as 2B "possibly carcinogenic to humans" when it is inhaled as dust. All Carbon Black in this product is dispersed in liquid, and is not inhalable.

Section 12. Ecological Information

Methyl Ethyl Ketone	Acute Toxicity		
	Fish	Practically non toxic	LL/EL/IL50 > 100 mg/l
	Aquatic		
	Invertebrates	Practically non toxic	LL/EL/IL50 > 100 mg/l
	Algae	Practically non toxic	LL/EL/IL50 > 100 mg/l
	Microorganisms	Practically non toxic	LL/EL/IL50 > 100 mg/l
	Mobility	Dissolves in water	
	Persistence/ Degradability	Readily biodegradable. Oxidizes rapidly by photo-chemical reactions in air.	
	Bioaccumulation	Not expected to bioaccumulate.	

