

**SAFETY DATA SHEET**

Quantum Technical Services Ltd.

**Section 1. Product and Company Identification**

Product Name	<b>Aquatherm Plus</b>
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 <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 20 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	If ingested, consult a physician. Give large amounts of water and induce vomiting. Never give anything by mouth or induce vomiting if victim is unconscious.

## Section 5. Fire Fighting Measures

Flash Point	Not applicable.
Auto Ignition Temperature (C)	Not applicable.
Upper Explosive Limit (% Vol.)	Not applicable.
Lower Explosive Limit (% Vol.)	Not applicable.
Extinguishing Media	Water, carbon dioxide, dry chemical, foam.
Hazardous Combustion Products	By fire: protect against potentially toxic and irritating fumes.
Sensitivity to Mechanical Impact	Not available.
Sensitivity to Static Discharge	Not applicable.
Special Fire Fighting Procedures	Firefighter should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

## Section 6. Accidental Release Measures

Leak/Spill	Dike area to prevent spreading. Spills should be taken up with suitable absorbent and placed in containers. Spill area can be washed with water. Collect wash water for approved disposal. Utilize recommended protective clothing.
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## Section 7. Handling and Storage

Handling Procedures	Avoid skin and eye contact. Avoid breathing dust. Remove contaminated clothing before reuse. Maintain good personal hygiene.
Storage Needs	Store in a cool and dry place, for product integrity and keep from freezing. Storage temperature range minimum 10-35°C. Store in tightly sealed container and protect from moisture and foreign materials. Keep container closed when not in use.

## Section 8. Exposure Controls and Personal Protection.

Protective Equipment	
Eye/Type	Wear safety glasses.
Respiratory/Type	If sprayed wear NIOSH/MSHA approved respirator. At least an air purifying respirator equipped with an organic vapour cartridge and particulate pre-filters must be worn.

Gloves/Type	Use gloves impervious to soap and water such as rubber, plastic, butyl or nitrile rubber gloves. A barrier cream. Practice good hygiene; wash thoroughly before handling any food.
Clothing/Type	Wear adequate protective clothing.
Footwear/Type	Not applicable.
Other/Type	Eyewash fountain. Emergency shower should be in close proximity.
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 this product 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	Little or no odor.
Specific Gravity	Approximately 1.2 (white) 1.1 (clear).
Odor Threshold(ppm)	Not applicable.
Vapor Pressure (mm Hg)	Not available.
Vapor Density (Air=1)	Not available.
Evaporation Rate	Slight.
Boiling Point	Approximately 100°C.
pH	Not available.
Solubility in Water	Complete.
Coefficient of Water/Oil	
Distribution	Not applicable.
Freezing Point (°C)	Approximately -0°C

## Section 10. Stability and Reactivity

Incompatibility	None known.
Reactivity Conditions	None known.
Hazardous Products of Decomposition	By fire: carbon monoxide, carbon dioxide.
Conditions of Instability	Stable under normal conditions.
Incompatibility	No known materials.

## 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.  
This product has been classified in accordance with the hazard criteria of the controlled products regulations and the SDS contains all the information required by the controlled products regulations.

Canadian DSL Status: All components in this product are listed on the DSL.

## **Section 16. Other Information**

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Prepared By Quantum Technical Services Ltd.

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