

SECTION 3 – CHEMICAL AND PHYSICAL DATA

Description of Material:	Complex mixture of naturally occurring silicates.
Appearance:	Dry fine sand.
Colour:	White to pale fawn.
Smell:	Very faint smell of tall oils.
Specific Gravity:	3.05.
Molecular Weight:	Not applicable, complex mixture of minerals.
Melting Point:	Incipient fusion at 1375°.
Boiling Point:	Not applicable.
Solubility:	Insoluble in water and common dilute acids. Soluble Hydrofluoric Acids.
Major Constituents:	Spodumene Concentrate – Standard Grade Spodumene $[(LiAl(SiO_3))] 90-95\%$, Quartz $(SiO_2) 5-6\%$, Sodium Feldspar $[Na(Si_3O_8)] 0.5-1.0\%$, Potassium Feldspar $[K(Si_3O_8)] 0.5-2.0\%$, Montebrasite/Amblygonite 0.25-0.50% Spodumene Concentrate - -200 Mesh Grade Spodumene $[(LiAl(SiO_3))] 88-90\%$ Quartz $(SiO_2) 4-6\%$ Sodium Feldspar $[Na(alSi_3O_8)] 1-2\%$ Potassium Feldspar $[K(AlSi_3O_8)] 2-3\%$ Montebrasite Amblygonite 0-1% Spodumene Concentrate – Glassmaker's Grade Spodumene $[LiAl(SiO_6)] 84-88\%$ Quartz $(SiO_2) 4-10\%$ Sodium Feldspar $[Na(AlSi_3O_8)] 1-2\%$ Potassium Feldspar $[K(AlSi_3O_8)] 2-3\%$ Montebrasite/Amblygonite 0-1%

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TRADE NAME
TANCO

Tantalum Mining Corporation of Canada Limited

BOX 2000, LAC DU BONNET
MANITOBA, CANADA R0E 1A0

MATERIAL SAFETY DATA SHEET



WHMIS CLASSIFICATION: D2A

SECTION 1 – PRODUCT IDENTIFICATION AND USE

Material Identifier: Spodumene Concentrate

Trade Name: TANCO – Spodumene Concentrate – Standard Grade
TANCO – Spodumene Concentrate – -200 Mesh Grade
TANCO – Spodumene Concentrate – Glassmaker's Grade
TANCO – Spodumene Concentrate – Spodulite Grade

Manufacturer: Tantalum Mining Corporation of Canada Limited
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Telephone Number: (204) 884-2400 ext. 242 T. Tonner (DAY)
(204) 345-6399 W. Ferguson (EMERGENCY)
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SECTION 2 – HAZARDOUS INGREDIENTS

Hazardous Ingredients	%	UN, NA or CAS Number	LD ₅₀ of Material (Specify Species and Route)	LC ₅₀ of Material (Specify Species)
Silica, crystalline (alpha quartz)	5%	1302-66-5	500 mg/kg	Unknown TC ₁₀ = 50 mg/M ³ (Rat)

PEL (Total Mass) = 0.1 mg/M³

TLV (Respirable Mass) = 0.1 mg/M³

Known human carcinogen, IRAC Group 1

Reactivity, and Under

What Conditions: Not Applicable.

Hazardous Decomposition

Products: Not Applicable.

SECTION 6 – TOXICOLOGICAL PROPERTIES

Toxicity: Mineral fraction is inert and non-toxic. Crystalline silica fraction is carcinogenic in laboratory animals by inhalation and injection routes.

Dust: Should be treated as other products containing quartz. (Quartz: TLV (Total Mass) 0.1 mg/m³. Prolonged and repeated exposure to dust may cause silicosis. Increased rates of lung cancer also have been reported among workers overexposed to quartz dust.

SECTION 7 – PREVENTATIVE MEASURES
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Respiratory Protection: NOAH/MSHA approved respirator is recommended when working in dusty conditions.

Eyes and Face: Safety glasses are recommended when any possibility of dust particles entering the eyes exists.

Other Protective Clothing: Gloves and other protective clothing may be worn if contact is appreciable.

Leak and Spill Procedure: Should be cleaned up by methods appropriate for dusty materials.

Waste Disposal: Dispose of in compliance with federal, provincial/state and local laws as they apply to non-hazardous material.

Tantalum Mining Corporation of Canada Ltd.

Chemical Analysis:

(Typical) Spodumene Concentrate – Standard Grade

Li ₂ O	7.25-7.50%	MnO ₂	0.010-0.060%
Na ₂ O	0.15-0.30%	Fe ₂ O ₃	0.040-0.070%
K ₂ O	0.05-0.20%	Al ₂ O ₃	24.0-27.0%
P ₂ O ₅	0.05-0.30%	SiO ₂	60.0-65.0%

(Typical) Spodumene Concentrate – -200 Mesh Grade

Li ₂ O	7.10-7.30%	MnO ₂	0.010-0.060%
Na ₂ O	0.15-0.30%	Fe ₂ O ₃	0.060-0.120%
K ₂ O	0.15-0.35%	Al ₂ O ₃	24.0-27.0%
P ₂ O ₅	0.15-0.35%	SiO ₂	64.0-68.0%

(Typical) Spodumene Concentrate – Glassmaker's Grade

Li ₂ O	6.80-7.00%	MnO ₂	0.010-0.060%
Na ₂ O	0.15-0.30%	Fe ₂ O ₃	0.060-0.120%
K ₂ O	0.15-0.35%	Al ₂ O ₃	24.0-27.0%
P ₂ O ₅	0.15-0.35%	SiO ₂	64.0-68.0%

SECTION 4 – FIRE AND EXPLOSION DATA

Flammability: Material is non-combustible.

Means of Extinction: Not Applicable.

Special Fire Fighting Procedures: Not Applicable.

SECTION 5 – REACTIVITY DATA

Chemical Stability: Material is stable.

Incompatibility with Other Substances: Not Applicable.