



# MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1/ ANSI standard  
Z400.1-2004

Revision Date: 02/February/2010

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Spodumene Concentrate

**Synonyms:** None

**This SDS is valid for the following grades:** Standard Grade, 200 Mesh Grade, Spodulite Grade

**Use of the Substance/Preparation:** Ore Mining and Refining, Concentrate, Ceramics, Heat resistant glasses, Foundry products, Steel production, Lithium production

**Supplier:**  
Tantalum Mining Corporation  
of Canada, Ltd. (TANCO)  
Bernic Lake  
Box 2000  
Lac du Bonnet, MB R0E 1A0  
CANADA  
Tel: 1-204-884-2400  
Fax: 1-204-884-2211

**Emergency Telephone Number:** US: CHEMTREC 1-800-424-9300 or 1-703-527-3887

## 2. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW - CAUTION:** White to beige solid. Dust irritating to respiratory tract. May be harmful if swallowed. May cause mechanical irritation. Avoid contact with skin and eyes.

**Principle Routes of Exposure:** Inhalation, Skin contact, Eye contact

**POTENTIAL HEALTH EFFECTS**

**Eye Contact:** May cause irritation. Avoid contact with eyes.

**Skin Contact:** May cause irritation. Avoid contact with skin.

**Inhalation:** Dust may be irritating to respiratory tract. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. See also Section 8.

**Ingestion:** May be harmful if swallowed.

**Carcinogenic Effects:** Substance listed by IARC (International Agency for Research on Cancer). See also Section 11.

**Target Organ Effects:** Lungs

**Medical Conditions Aggravated by Exposure:** Asthma, Respiratory disorder

**Potential Environmental Effects:** No special environmental precautions required.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Chemical Name	CAS Number	EINECS/ELINCS Number	Weight %	EU Classification
Spodumene	1302-37-0	Not assigned	84-95	None
Quartz	14808-60-7	238-878-4	4-10	Not determined
Feldspar	68476-25-5	270-666-7	0.5-3	None
Montebrasite/Amblygonite	Not assigned	Not assigned	0.5-1	None

**4. FIRST AID MEASURES**

<b>Skin Contact:</b>	Wash thoroughly with soap and water. Seek medical attention if redness, swelling, itching, or burning occurs.
<b>Eye Contact:</b>	Flush eyes immediately with large amounts of water for 15 minutes. Seek medical attention if redness, swelling, itching, burning or visual disturbances occur.
<b>Inhalation:</b>	If cough, shortness of breath or other breathing problems occur, move to fresh air. Seek medical attention if symptoms persist. If necessary, restore normal breathing through standard first aid measures.
<b>Ingestion:</b>	Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.
<b>Notes to Physician:</b>	Treat symptomatically.

**5. FIRE AND IGNITION INFORMATION**

<b>Flash Point:</b>	Not determined
<b>Explosion Limits in Air - Upper (g/m<sup>3</sup>):</b>	Not determined
<b>Explosion Limits in Air - Lower (g/m<sup>3</sup>):</b>	Not applicable
<b>OSHA Flammability Classification:</b>	Not flammable
<b>Autoignition Temperature:</b>	Not determined
<b>Method:</b>	Not determined
<b>Extinguishing Media:</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Special Protective Equipment for Firefighters:</b>	Wear suitable protective equipment. In the event of fire, wear self-contained breathing apparatus.
<b>Specific Hazards:</b>	Product resists ignition and does not promote flame spread.
<b>Hazardous Decomposition and/or Combustion Products:</b>	None.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions:</b>	Avoid dust formation. Ensure adequate ventilation. Use personal protective equipment. See also Section 8.
<b>Methods for Cleaning Up:</b>	Cleanup can be done by washing. Clean up promptly by vacuum. Use a suitable vacuum cleaner. Do not create a dust cloud by using a brush or compressed air. Pick up and transfer to properly labelled containers. See Section 13.
<b>Environmental Precautions:</b>	No special environmental precautions required. Local authorities should be advised if significant spillages cannot be contained.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Do not create a dust cloud by using a brush or compressed air.
<b>Storage:</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store together with volatile chemicals as they may be adsorbed onto product. Keep at ambient temperatures.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE LIMITS

<b>Dust, or Particulates Not Otherwise Specified:</b>	US ACGIH - TLV:	10 mg/m <sup>3</sup> , TWA, Inhalable 3 mg/m <sup>3</sup> , TWA, Respirable
	Belgium:	10 mg/m <sup>3</sup> , TWA, Inhalable 3 mg/m <sup>3</sup> , TWA, Respirable
	China:	8 mg/m <sup>3</sup> , TWA 10 mg/m <sup>3</sup> , STEL
	Italy:	10 mg/m <sup>3</sup> , TWA, Inhalable 3 mg/m <sup>3</sup> , TWA, Respirable
	Malaysia:	10 mg/m <sup>3</sup> , TWA, Inhalable 3 mg/m <sup>3</sup> , TWA, Respirable
	Spain:	10 mg/m <sup>3</sup> , VLA, Inhalable 3 mg/m <sup>3</sup> , VLA, Respirable
	<b>Silica, Crystalline (Quartz) CAS RN 14808-60-7:</b>	Austria MAK:
	Belgium:	0.1 mg/m <sup>3</sup> , TWA
	Denmark:	0.1 mg/m <sup>3</sup> , TWA
	Finland:	0.2 mg/m <sup>3</sup> , TWA
	France:	0.1 mg/m <sup>3</sup> , VME
	Ireland:	0.3 mg/m <sup>3</sup> , TWA
	Italy:	0.025 mg/m <sup>3</sup> , TWA
	Switzerland:	0.15 mg/m <sup>3</sup> , TWA
	UK WEL:	0.3 mg/m <sup>3</sup> , TWA
	US OSHA PEL:	0.1 mg/m <sup>3</sup>
	US ACGIH TLV:	0.025 mg/m <sup>3</sup>

**MAK: Maximale Arbeitsplatzkonzentration (Maximum Workplace Concentration)**

**OEL: Occupational Exposure Limit**

**PEL: Permissible Exposure Limit**

**STEL: Short Term Exposure Limit**

**TLV: Threshold Limit Value**

**TRGS: Technische Regeln für Gefahrstoffe (Technical Rule for Hazardous Materials)**

**TWA: Time Weighted Average**

**US ACGIH: United States American Conference of Governmental Industrial Hygienists**

**US OSHA: United States Occupational Safety and Health Administration**

**VLA: Valore Limite Ambientales (Environmental Limit Value)**

**WEL: Workplace Exposure Limit**

### ENGINEERING CONTROLS

Ensure adequate ventilation to maintain exposures below occupational limits. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

### PERSONAL PROTECTIVE EQUIPMENT

**Respiratory Protection:** Approved respirator may be necessary if local exhaust ventilation is not adequate.

**Hand Protection:** Repeated exposure may cause skin dryness or cracking. Use protective barrier cream before handling the product. Wear suitable gloves.

<b>Eye Protection:</b>	Wear eye/face protection. Safety glasses with side-shields. Goggles.
<b>Skin and Body Protection:</b>	Wear suitable protective clothing. No special protective equipment required.
<b>Other:</b>	Handle in accordance with good industrial hygiene and safety practice. Emergency eyewash and safety shower should be located nearby.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	White - Beige Solid
<b>Odor:</b>	None
<b>pH:</b>	Not determined
<b>Boiling Point/Range:</b>	Not applicable
<b>Melting Point/Range:</b>	Not determined
<b>Water Solubility:</b>	Insoluble
<b>Specific Gravity:</b>	3.05
<b>% Volatile (by Volume):</b>	Not applicable
<b>Partition Coefficient (n-octanol/water):</b>	Not applicable

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable
<b>Hazardous Polymerization:</b>	Hazardous polymerization does not occur.
<b>Mechanical Sensitivity (shock):</b>	Not sensitive to mechanical impact.
<b>Conditions to Avoid:</b>	Soluble in hydrofluoric acid.
<b>Hazardous Decomposition and/or Combustion Products:</b>	None.
<b>Static Discharge Effects:</b>	Not applicable.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY

**Oral LD50:** Not determined.

**Inhalation LC50:** Not determined.

**Dermal LD50:** Not determined.

**Eye Irritation:** Not determined.

**Skin Irritation:** Not determined.

### SUBCHRONIC TOXICITY

No data are available on the product itself.

### CHRONIC TOXICITY

**Carcinogenic Effects:** Substance listed by IARC (International Agency for Research on Cancer). (Quartz Silica, CAS RN 14808-60-7).

**Note:** Should be treated as other products containing quartz. Prolonged and repeated exposure to dust may cause silicosis. Increased rates of lung cancer also have been reported among workers overexposed to quartz dust.

#### OTHER

**Mutagenic Effects:**

No data are available on the product itself.

**Reproductive Toxicity:** No data are available on the product itself.

**Sensitizing Effects:** Contains no known sensitizers.

**Synergistic Materials:** None reasonably foreseeable.

### 12. ECOLOGICAL INFORMATION

**Aquatic Toxicity:** No data are available on the product itself.

#### ENVIRONMENTAL FATE

**Mobility:** Insoluble. Not expected to migrate.

**Bioaccumulation:** Not expected due to physicochemical properties of the substance.

**Persistence / Degradability:** No data are available on the product itself

**Distribution to Environmental Compartments:** Not determined.

### 13. DISPOSAL CONSIDERATIONS

**Disclaimer:** Information in this section pertains to the product as shipped in its intended composition as described in Section 3 of this MSDS. Contamination or processing may change waste characteristics and requirements. Regulations may also apply to empty containers, liners or rinsate. State/provincial and local regulations may be different from federal regulations.

**RCRA Classification (40 CFR 261):** Not a hazardous waste.

**Unused and Uncontaminated Product:** Product, as supplied, should be disposed of in accordance with the regulations issued by the appropriate federal, state and local authorities. Same consideration should be given to containers and packaging.

### 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

### 15. REGULATORY INFORMATION

#### Hazard Classification

**United States - OSHA (29 CFR 1910.1200):** Hazardous.

**Mexico - NOM-018-STPS-2000:** Refer to HMIS Rating in Section 16.

**Canada - WHMIS Classification (CPR, SOR/88-66):** Class D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Chemical Name	WHMIS Ingredient Disclosure List:
Quartz	

**International Inventories**

All components of this product are listed on or exempt from the following inventories:

- NO - Australian Inventory of Chemical Substances (AICS)
- YES - Canadian Domestic Substances List (DSL)
- NO - Chinese Inventory
- NO - European Inventory of Existing Chemical Substances (EINECS)
- NO - Japanese Inventory of Existing and New Chemical Substances (ENCS)
- YES - Korean Existing Chemicals List (KECL)
- NO - New Zealand Hazardous Substances and New Organisms Act (HSNO)
- NO - Philippines Inventory of Chemicals and Chemical Substances (PICCS)
- YES - United States Toxic Substances Control Act (TSCA) Inventory

**U.S. Federal Regulations**

**TSCA 12(b) Export Notification:** This product does not contain any components that are subject to TSCA 12(b) Export Notification.

**Clean Air Act Amendments of 1990 (CAA, Section 112, 40 CFR 82):** This product does not contain any components listed as a Hazardous Air Pollutant, Flammable Substance, Toxic Substance, or Class 1 or 2 Ozone Depletor.

**Clean Water Act (CWA, 40 CFR 116) Priority Pollutants:** This product does not contain any listed Priority Pollutants.

**Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 40 CFR 302):** This product does not contain any listed Hazardous Substances.

**Superfund Amendments and Reauthorization Act, Title III (SARA):**

**SARA Section 302 (40 CFR 355) Extremely Hazardous Substances:** No components are listed as extremely hazardous substances under SARA Section 302.

**SARA Sections 311/312 (40 CFR 370) Hazard Category:** This product does not meet any of the MSDS Requirement definitions for a hazardous material under SARA Sections 311/312. Reporting may be required if the material is present at any one time in amounts equal to or greater than 10,000 pounds.

**SARA Section 313 (40 CFR 372) Toxics Release Inventory:** Does not contain any of the substances identified under Section 313 as toxic chemicals in excess of the de minimis concentrations necessary to be subject to the supplier notification requirements.

**Pharmaceutical Information:** Not recommended.

**U.S. State Regulations**

**California Proposition 65:** This product contains a component(s) that is listed on California Proposition 65.

**US Coalition of NorthEastern Governors (CONEG) Metals List:** Not determined.

**16. OTHER INFORMATION**

**HMIS Rating**

HMIS Index: \* - chronic, 0 - minimal, 1 - slight, 2 - moderate, 3 - serious, 4 - severe

Health: 2\*

Flammability: 0

Physical Hazard: 0

**Prepared by:** Cabot Corporation - Safety, Health and Environmental Affairs  
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**Reason for Revision:** 3-Year Update

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