

# SAFETY DATA SHEET



## Multi-Purpose Zeolite

### Section 1 – Product and Company Identification

<b>Product Identifier:</b>	<b>Multi-Purpose Zeolite</b>
<b>Other Names:</b>	Zeocan, Clinoptilolite
<b>Product Use:</b>	Absorbent, Desiccant, Abrasive, Traction Aid
<b>Manufacturer/Supplier:</b>	Zeocan Corp. 41 Bremen Lane Mississauga, Ontario L5M 1G7
<b>Emergency Telephone Number:</b>	416-414-1500

### Section 2 – Hazards Identification

**This product is labelled in accordance with regulations administered by the Canada Consumer Product Safety Act. In the workplace, the use pattern and exposure are generally not equivalent with those experience by consumers. The requirements of the Globally Harmonized System of Classification and Labelling of Chemicals applicable to this SDS differ from the labelling requirements of the Canada Consumer Product Safety Act and, as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.**

#### **GHS Classification Substance or Mixture:**

Carcinogenicity – Category 1A – H350i

Specific Target Organ Toxicity (Repeated Exposure) – Category 1 – H372

#### **Label Elements:**

Hazard Pictogram



**Signal Word:** Danger

#### **Hazard Statements:**

H350i – May cause cancer by inhalation.

H372 – May cause damage to organs through prolonged or repeated exposure if inhaled.

#### **Precautionary Statements:**

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe dust.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P281 - Use personal protective equipment as required.

P308 + P313 - IF exposed or concerned: Get medical advice/attention.

P314 - Get medical attention/advice if you feel unwell.

P405 - Store in a safe, secure location.

P501 - Dispose of contents/container in accordance with local regulations.

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**Summary:** Prolonged and repeated exposure to excessive concentrations of this product's dust containing respirable size ( $\leq 10 \mu$ ) quartz, or any nuisance dust, can cause chronic pulmonary disease. Dust contact with eyes may cause temporary scratchiness or redness. Long-term exposure can cause silicosis. The NTP (National Toxicology Program) and IARC (International Agency for Research on Cancer) has determined that crystalline silica inhaled from occupational sources can cause cancer in humans. Risk of injury is dependent on the duration and level of exposure.

**A single exposure under normal conditions will not result in serious adverse effects.**

**Medical Conditions Which May Be Aggravated:** Pre-existing upper respiratory and lung disease, such as, but not limited to: Bronchitis, emphysema and asthma.

**Target Organ(s):** Lungs.

**See Section 11 – Toxicological Information**

### Section 3 – Composition/Information on Ingredients

INGREDIENTS	%	CAS NUMBER	OSHA PEL (ACGIH TLV)	LD50/LC50 SPECIES & ROUTE
<b>Natural Zeolite</b>	Up to 100%	1318-02-1	See Section 8	N/av.
<b>Free Crystalline Silica</b>				
Quartz	<3%	14808-60-7	See Section 8	N/av.
Cristobalite	<13%	14464-46-1		
<b>(Occurs naturally in Zeolite)</b>				

For sampling silica dusts refer to NIOSH Analytical Method 7500 or OSHA Method ID 142

### Section 4 – First Aid Measures

**Inhalation:** May cause respiratory irritation. Remove victim to fresh air. If breathing has stopped, a trained person should perform artificial respiration. Acute inhalation can cause dryness of the nasal passage and congestion of the upper respiratory tract.

**Ingestion:** Do not induce vomiting. Short-term exposure not considered harmful. Drink generous amounts of water to reduce bulk and drying effects.

**Eyes:** Wash with large quantities of water. Consult physician if irritation persists. May cause irritation/inflammation.

**Skin:** May cause dryness. Remove contaminated clothing. Wash with soap and water until clean. Use moisture-renewing lotions if dryness persists.

### Section 5 – Fire Fighting Measures

<b>Flammability:</b>	<b>No</b>		
Means of Extinction:	N/ap.	Upper Flammability Limit (% by Volume):	N/ap.
Flashpoint (Method):	Non-Flammable	Lower Flammability Limit (% by Volume):	N/ap.
Auto Ignition Temperature:	N/ap.	Extinguishing Media:	N/ap.
Hazardous Combustion Products:	N/ap.	Special Procedures:	N/ap.
<b>Explosion Data</b>			
Sensitivity to Impact:	No	Sensitivity to Static Discharge:	No

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### Section 6 – Accidental Release Measures

**Procedure For Spills/Leaks:** Avoid creating further dust. Vacuum with equipment fitted with a filter. Alternatively, wet sweep or wash away. Dispose of in accordance with local, State and Federal regulations.

### Section 7 – Handling and Storage

**Handling Procedures:** Avoid creating dust. Repair or properly dispose of broken bags. Use wet process or enclosed handling.

**Storage Requirements:** Store in a dry place to maintain. Keep containers closed and in good condition. Repair damaged containers.

### Section 8 – Exposure Controls/Personal Protection

<b>Permissible Exposure Limits:</b> (for airborne, nuisance dusts)	<b>OSHA PEL</b> 8 HR TWA	<b>ACGIH</b> TLV	<b>OHS</b> 8 HR TWA	<b>OHS STEL</b>
Zeolite				
Total dust	15 mg/m <sup>3</sup>	Not detected	4 mg/m <sup>3</sup>	n/a
Respirable dust	5 mg/m <sup>3</sup>	Not detected	1.5 mg/m <sup>3</sup>	n/a
Crystalline quartz, cristobalite (respirable)	0.05 mg/m <sup>3</sup>	0.025 mg/m <sup>3</sup>	0.025 mg/m <sup>3</sup>	n/a

**Effects Of Chronic Exposure To Product:** Exposure to quantities of crystalline silica respirable dust ( $\leq 10 \mu$ ), in the forms of quartz, cristobalite or tridymite, may occur when in the presence of airborne dust. If the dust concentration levels are in excess of the OSHA Permissible Limit (PEL-TWA 8hrs) of 0.05 mg/m<sup>3</sup> or the ACGIH Threshold Limit Value (TLV) of 0.025 mg/m<sup>3</sup>, the crystalline silica present is a known cause of silicosis, a progressive, sometimes fatal, lung disease. From the International Agency for Research on Cancer (IARC), a 2012 review of “Silica Dust, Crystalline, in the form of Quartz or Cristobalite” coded Monograph 100C concluded that Crystalline silica in the form of quartz or cristobalite dust is carcinogenic to humans (Group 1).

**Engineering Controls (Specify, e.g. Ventilation, Enclosed Process):** Control within recommended TLV/PEL, mechanical filtration to minimize dust. Refer to ACGIH publication “Industrial Ventilation” or similar publications for design of ventilation systems.

**Personal Protective Equipment:**

**Gloves:** Not needed under normal conditions of use.

**Eye:** Use protective goggles in high dust conditions.

**Footwear:** As required on job site.

**Clothing:** Wear coveralls in high dust conditions.

**Respirator:** Avoid breathing dust. See instructions below.

Bureau of Mines or NIOSH approved respirators for protection against pneumoconiosis producing dusts recommended when dust is present. If the dust concentration is less than 10 times the Permissible Exposure Limit (PEL) use quarter or half mask respirator (N95) with replacement dust filter or single use dust respirator with valve. If dust concentration is greater than 10 times and less than 100 times the PEL use full faceplate respirator with replaceable dust filter (N95 filter); if greater than 100 and less than 200 times the PEL use power air purifying (positive pressure) respirator with replaceable filter (N95 filters); if greater than 200 times the PEL use type C, automatic-air-respirator, continuous flow type (positive pressure), with full face piece, head or helmet.

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### Section 9 – Physical and Chemical Properties

<b>Physical State:</b>	Solid	<b>Odour &amp; Appearance:</b>	No odour, grey granules
<b>Vapour Pressure (mm Hg):</b>	N/ap.	<b>Density (20°C):</b>	58 lb.\cu. ft. +/- 5
<b>Vapour Density (Air=1):</b>	N/ap.	<b>Solubility In Water:</b>	Insoluble
<b>Specific Gravity (Water=1):</b>	2.25	<b>pH:</b>	6.5 – 7.5
<b>Freezing Point:</b>	N/ap.	<b>Evaporation Rate:</b>	N/ap.
<b>Boiling Point:</b>	N/ap.		

### Section 10 – Stability and Reactivity

<b>Chemical Stability:</b>	Yes
<b>Incompatibility With Other Substances:</b>	Yes - Hydrofluoric acid – silica may react violently
<b>Reactivity, and Under What Conditions:</b>	N/ap.
<b>Hazardous Decomposition Products:</b>	N/ap.
<b>Conditions To Avoid:</b>	None in Designed Use

### Section 11 – Toxicological Information

Long term to moderate exposure to high concentrations of Zeolite dust may affect sinus, respiratory tract and/or chest health. No toxicological effects are expected of concentrations of respirable dust ( $\leq 10 \mu$ ) are kept below the Permissible Exposure Limit (PEL). The National Toxicology Program (NTP) and International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled from **occupational sources** can cause cancer in humans. IARC studies were done on historical records of industrial (mining) employees, who worked full time, over many years, in high dust environment with little or no personal protective equipment (PPE). Risk of injury is dependent on the duration and level of exposure.

**Typical non-industrial exposure (residential use) will not result in serious adverse effects.**

#### **Primary Entry Route(s):**

**Eyes:** May cause temporary irritation or inflammation.

**Skin:** May cause dryness with continued exposure.

**Ingestion:** Not considered harmful, by mouth, throat and/or stomach. Minor irritation may occur.

**Inhalation:** Persistent dry cough, throat irritation and labored breathing on exertion are symptomatic of exposure to airborne dust. Exposure may aggravate existing upper respiratory tract diseases such as asthma, bronchitis or emphysema. **Acute (short term)** exposure to dust levels exceeding the PEL may cause irritation of respiratory tract resulting in a dry cough. Eyes may develop redness and become itchy. **Chronic (long term)** exposure to crystalline silica contained by airborne zeolite, where levels are higher than TLV's, may lead to the development of silicosis, other respiratory problems, or some forms of cancer. From the International Agency for Research on Cancer (IARC), in a 2012 review of SILICA DUST, CRYSTALLINE, IN THE FORM OF QUARTZ OR CRISTOBALITE (monograph 100C) concluded that "Crystalline Silica in the form of quartz or cristobalite dust is *carcinogenic to humans* (group 1)." The National Toxicology Program (NTP) has determined that "Respirable crystalline silica, primarily quartz dust **occurring in industrial and occupational settings**, is known to be a human carcinogen."

<b>LD50:</b>	Oral, Rat	Greater than 5,100 mg/kg
	Dermal, Rabbit	Greater than 5,000 mg/kg
<b>LC50:</b>	Inhalation, Rat, 4H	Greater than 3,350 mg/kg

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## Section 12 – Ecological Information

Eco-toxicity: Low acute toxicity to aquatic organisms. Product is generally considered chemically inert in the environment. Used product that has become contaminated may have significantly different characteristics than uncontaminated product and should be re-evaluated accordingly. Dispose of in accordance with Local, State and Federal regulations.

## Section 13 – Disposal Considerations

Uncontaminated waste is not hazardous as defined by the Resource Conservation and Recovery Act (RCRA, 40 CFR261). Contaminated waste must be evaluated based on contamination source. Consult local agencies as needed. Dispose of in accordance with Local, State and Federal regulations.

## Section 14 – Transport Information

<b>DOT Shipping Name:</b>	Not regulated by DOT	<b>Canada TDG:</b>	Not regulated by TDG
<b>DOT Hazard Class:</b>	n/a	<b>Hazard Class:</b>	n/a
<b>Identification #:</b>	n/a	<b>UN #:</b>	n/a

## Section 15 – Regulatory Information

**OSHA:** This material is considered hazardous. See Section 11

**WHMIS:** Uncontrolled product according to WHMIS classification criteria.

**EINECS:** Not listed.

**CND DSL:** This product is not listed on the DSL.

**TSCA:** This material is not listed in the TSCA inventory and is not otherwise regulated by TSCA, sec 4,5,6,7 or 12

**NTP:** “Respirable crystalline silica, primarily quartz dust occurring in industrial and occupational settings, is known to be a human carcinogen.”

**California Prop 65:** Listed: Crystalline Silica (airborne particles of respirable size).

**RCRA:** This material is not defined as hazardous waste.

## Section 16 – Other Information

**Revision Date:** April 12, 2020



4 - Extreme  
3 - High  
2 - Moderate  
1 - Slight  
0 - Insignificant

### NFPA Hazard Rating:

Health - 1, Flammability - 0, Reactivity - 1

### Abbreviations:

N/av.: Not available

N/ap.: Not applicable

ppm: parts per million

TLV: Threshold Limit Value

All information presented herein is believed to be accurate; however, it is the user's responsibility to determine in advance of need that the information is current and suitable for their circumstances. No warranty or guarantee, expressed or implied is made by Zeocan Corp., as to the information, or as to the safety, toxicity or the effect of this product.