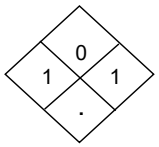
SecondCycle
20.2-190 Dorchester
Quebec, QC
1-833-280-2828
zeolite@secondcycle.net

SAFETY DATA SHEET

Abbreviations used on this Safety Data Sheet:
N/av. = Not available, N/ap. = Not applicable, ppm = parts per million, TLV = Threshold Limit Value.
NFPA Hazard Rating: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-None, X-Blank

SECTION I - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

PRODUCT NAME:	**Z-lite**
OTHER NAMES:	**Zeolite, Clinoptilolite** **Hydrated Calcium Aluminosilicate**
MATERIAL USE:	**Absorbent, Desicant, Abrasive**
DISTRIBUTOR'S NAME:	**Second Cycle Inc**
STREET ADDRESS:	**20.2-190 Dorchester**
CITY/PROVINCE:	**Québec, QC**
POSTAL CODE:	**G1K 5Y9**
EMERGENCY TELEPHONE NUMBER:	**1-833-280-2828**



4 - extreme
3 - high
2 - moderate
1 - slight
0 - insignificant

NFPA HAZARD RATING:
Health - 1, Flammability - 0, Reactivity - 1

SECTION II - HAZARD IDENTIFICATION

SUMMARY: Prolonged & repeated exposure to excessive concentrations of respirable (≤ 10 μ) crystalline silica dust, 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. IARC studies 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.**

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 X1 - TOXICOLOGICAL INFORMATION

SECTION III - COMPOSITION OF SUBSTANCE

HAZARDOUS INGREDIENTS	%	CAS NUMBER	OSHA PEL (ACGIH TLV)	LD50/ /LC 50 SPECIES AND ROUTE
Natural Zeolite	**Up to 100%**	**1318-02-1**	**See Section VIII**	**N/av.**
Free Crystalline Silica				
quartz	**<3%**	**14808-60-7**	**See Section VIII**	**N/av.**
cristobalite	**<13%**	**14464-46-1**		
(Occurs naturally in Zeolite)				

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

SECTION IV - 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.

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SECTION V - FIREFIGHTING MEASURES

Flammability	**No**		
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.**
Explosion Data			
Sensitivity to Impact	**No**	Sensitivity to Static Discharge	**No**

SECTION VI - 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 VII - 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 VIII - EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERMISSIBLE EXPOSURE LIMITS:	**OSHA PEL**	**ACGIH**	**OHS**	**OHS STEL**
(for airborne, nuisance dusts)	8 hr TWA	TLV	8 hr TWA	
Zeolite				
Total dust	15 mg/m^3	Not detected	4 mg/m^3	n/a
Respirable dust	5 mg/m^3	Not detected	1.5 mg/m^3	n/a
Crystalline quartz, cristobalite (respirable)	0.1 mg/m^3	0.025mg/m^3	0.025mg/m^3	n/a

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT. Exposure to quantities of crystalline silica respirable dust (≤10 μ), 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 0.1mg/m^3 or the ACGIH Threshold Limit Value (TLV) of 0.025mg/m^3, 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 ten (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 ten (10) times and less than one hundred (100) times the PEL use full faceplate respirator with replaceable dust filter (N95 filter); if greater than one hundred (100) and less than two hundred (200) times the PEL use power air purifying (positive pressure) respirator with replaceable filter (N95 filters); if greater than two hundred (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 IX - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	solid	**ODOR AND APPEARANCE**	No odor, grey powder/granules
VAPOR PRESSURE (mm Hg)	N/ap.	**DENSITY (20 degrees Celsius)**	58 lb\cu. ft. +/- 5
VAPOR DENSITY (Air = 1)	N/ap.	**SOLUBILITY IN WATER**	Insoluble
SPECIFIC GRAVITY (Water=1)	2.25	**pH**	6.9-7.1
FREEZING POINT	N/ap.	**EVAPORATION RATE**	N/ap.
BOILING POINT	N/ap.		

SECTION X - STABILITY AND REACTIVITY

CHEMICAL STABILITY (IF NO, UNDER WHICH CONDITIONS)	YES NO	**X**	
INCOMPATIBILITY WITH OTHER SUBSTANCES (IF YES, SPECIFY)	YES NO	**X**	**Hydrofluoric acid - silica may react violently**
REACTIVITY, AND UNDER WHAT CONDITIONS	N/ap.		
HAZARDOUS DECOMPOSITION PRODUCTS	N/ap.		
CONDITIONS TO AVOID	None in Designed Use		

SECTION XI - 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 (≤ 10 μ) are kept below the Permissible Exposure Limit (PEL). 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. . 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 NTP (National Toxicology Program has determined that "Respirable crystalline silica, primarily quartz dust **occurring in industrial and occupational settings**, is know to be a human carcinogen."

LD50:	Oral, Rat	Greater than 5100 mg/kg
	Dermal, Rabbit	Greater than 5000 mg/kg
LC50:	Inhalation, Rat, 4H	Greater than 3350 mg/kg

SECTION XII - 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 XIII - 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.

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SECTION XIV - TRANSPORTATION INFORMATION

DOT Shipping Name: Not Regulated by DOT		**Canada TDG:** Not Regulated by TDG	
DOT Hazard Class:	n/a	**Hazard Class:**	n/a
Identification #:	n/a	**UN #:**	n/a

SECTION XV - 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."
Calif Prop 65:	Listed: Crystalline Silica (airborne particles of respirable size)	**RCRA:**	This material is not defined as hazardous waste

SECTION XVI - OTHER INFORMATION

PREPARED BY:	PHONE NUMBER	DATE
Quality Control Staff, Absorbent Products Ltd.	**1-800-667-0336**	**October, 2016**

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 Absorbent Products Ltd., as to the information, or as to the safety, toxicity or the effect of this product.