Material Safety Data Sheet

1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Silica+ (ground silica)
OTHER/GENERIC NAMES: Silica flour, quartz
CHEMICAL NAME: Silicon Dioxide
CHEMICAL FORMULA: SiO2
PRODUCT USE: Intended to be added to animal feed

DISTRIBUTOR:
CERESCO NUTRITION
164, Chemin de la Grande-Ligne
Saint-Urbain-Premier, J0S 1Y0
QUEBEC, CANADA

For more information call:
CERESCO NUTRITION: 1 888 427 7692

2 - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS NUMBER</th>
<th>WEIGHT%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>98%</td>
</tr>
</tbody>
</table>

Silica is considered dangerous when in fraction inferior to 10 microns.
Silica+ = 40 microns

3 - HAZARD IDENTIFICATION

SPECIFIC HAZARDS: Respiratory risk: Prolonged exposure to crystalline silica dust can cause silicosis risk.
MAIN SYMPTOM: Cough and shortness of breath
ENVIRONMENTAL RISK: None
PHYSICAL AND CHEMICAL RISK: None
4 - FIRST AID MEASURES

INHALATION: Stay calm
Exposure the victim to fresh air
Consult a doctor in case of prolonged exposure

SKIN: Clean with water and soap
Consult a doctor if necessary

EYES: Immediately flush thoroughly with water, also under eyelids, at least 15 minutes
No risk.

INGESTION: Rinse mouth
Consult a doctor if necessary

ADDITIONAL RECOMMENDATIONS:
Show this safety data sheet to the doctor
Treat symptomatically

5 – FIRE FIGHTING MEASURES

SPECIFIC HAZARD: None applicable
EXTINGUISHING MEDIA: None applicable
EXPLOSION HAZARD: None applicable
SPECIAL FIRE FIGHTING PRECAUTION/INSTRUCTION: None applicable

6 – ACCIDENTAL RELEASE MEASURES

INDIVIDUAL CAUTION: Wear personal protective equipment listed in section 8
Evacuate area of all unnecessary personnel.
Do not inhale dust
Avoid making dust
Ensure adequate ventilation

ENVIRONMENTAL CAUTION:
None

CLEANING METHOD: Collect by suction
Eliminate product following local regulations
7 – HANDLING AND STORAGE

STORAGE: Keep hermetically closed in a cool, dry and well ventilated place
Capture airborne dust during manipulation of product

HANDLING: Wear personal protective equipment listed in section 8
Do not inhale dust
Humid or dry use with suction system
Airborne dust should be aspirated at its emission point
Handle in accordance with good industrial hygiene practices and safety instructions

8 – EXPOSURE CONTROL/PERSOAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: In case of insufficient ventilation, wear a suitable breathing apparatus

SKIN PROTECTION: Unnecessary when used normally

EYE PROTECTION: Safety glasses

ENGINEERING CONTROLS:
Use adequate ventilation to keep airborne concentrations low

ADDITIONAL RECOMMENDATIONS:
Handle in accordance with good industrial hygiene practices and safety instructions
Only use in area with air suction system

EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>10/ (%SiO2+2)</td>
<td>0.025 mg/m³</td>
<td>0.05 mg/m³</td>
</tr>
</tbody>
</table>

*Silica+ is intended to be used in feed manufacturing at very low dosage (200gr/ton). Exposure to Silica+ dust is minimal with this usage.
9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White
PHYSICAL STATE: Solid
FORM: Crystalline
ODOR: None
PH: 7
BOILING POINT: 4046 F
MELTING POINT: 2912 F
FLASH POINT: None applicable
VAPOR PRESSURE: None applicable
VAPOR DENSITY: None applicable
ABSOLUTE DENSITY: $2.650 \text{ g/cm}^3$
SOLUBILITY: Not in water, soluble in hydrofluoric acid

10 – STABILITY AND REACTIVITY

STABILITY: None applicable
INCOMPATIBILITY: Oxidizing agents
SPECIFIC EFFECT: Toxic vapor in contact with hydrofluoric acid
HAZARDOUS DECOMPOSITION PRODUCTS: None

11 – TOXICOLOGY INFORMATION

IMMEDIATE EFFECTS: No
LOCAL EFFECTS: Negative
SKIN AND EYES: Unknown
CHRONIC EFFECTS: Excessive exposure to dust may result in respiratory disease such as silicosis, pulmonary fibrosis, etc.

IARC: Group 1.
Inhalation of Crystalline silica (quartz) in workplace is carcinogen for humans*

*Silica+ is intended to be added to animal feed at very low dosage (200gr/ton). In our application, Silica+ is not intended to be used in workplaces such as extraction mines, material manufacturing or construction companies

12 – ECOLOGICAL INFORMATION

MOBILITY: None
PERSistance/DEGRADABILITY: Negative
ECOTOXICITY: Not known to be eco toxic
13 – DISPOSAL CONSIDERATIONS

**GENERAL:**
Material should be covered to minimize generating airborne dust

**RCRA:**
Crystalline silica (Quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR 261 et seq.

14 – TRANSPORT INFORMATION

**USA – DOT:** Crystalline silica (Quartz) is not a hazardous material for purposes of transportation under the U.S. department of Transportation Table Hazardous Materials, 49 CFR 172.101.

**CANADA – TMD:** Crystalline silica (Quartz) is not a hazardous material for purposes of transportation under the Canadian Hazardous Material Transport.

15 – REGULATORY INFORMATION

**UNITED STATES (FEDERAL AND STATE)**

**TSCA No.:** Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7.

**RCRA:** Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

**CERCLA:** Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.

**Emergency Planning and Community Right to Know Act (SARA Title III):** Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.

**NTP:** Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.

**OSHA Carcinogen:** Crystalline silica (quartz) is not listed.

**California Proposition 65:** Crystalline silica (airborne particles of respirable size) is classified as a substance known to the State of California to be a carcinogen.

California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 ug for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

**Massachusetts Toxic Use Reduction Act:** Silica, crystalline (respirable size, <10 microns) is “toxic” for purposes of the Massachusetts Toxic Use Reduction Act.

**Pennsylvania Worker and Community Right to Know Act:** Quartz is a hazardous substance under the Act, but it is not a special hazardous substance or an environmental hazardous substance.

**CANADA**

**WHMIS Classification:** D2A
OTHER
EINECS No.: 238-878-4
EEC Label (Risk/Safety Phrases): R 48/20, R 40/20, S22, S38
IARC: Crystalline silica (quartz) is classified in IARC Group 1.
Japan MITI: All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law.
Australian Inventory of Chemical Substances: All of the components of this product are listed on the AICS inventory or exempt from notification requirements.

16 – OTHER INFORMATION

Hazardous Material Information System (HMIS):
Health 2
Flammability 0
Reactivity 0
Protective Equipment E

* For further information on health effects, see Sections 2 and 11 of this MSDS.

National Fire Protection Association (NFPA):
Health 0
Flammability 0
Reactivity 0

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