SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product from: Substance
Trade name: Silica Sand, All Grades
CAS No.: 14808-60-7
Product group: Commercial product

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/preparation: Sand for specialty applications
Prohibited for use in sandblasting.

1.3. Details of the supplier of the safety data sheet
Carbon Enterprises Inc.
PO Box 787
28205 Scippo Creek Rd
Circleville, OH 43113
800-344-5770
info@ceifiltration.com
ceifiltration.com

1.4. Emergency telephone number
Emergency number: 740-420-6472
9:00 AM to 4:30 PM
Monday through Friday

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification
Carc. 1A H350
STOT SE 3 H335
STOT RE 1 H372

Full text of H-phrases: see section 16

2.2. Label elements
GHS-US labelling
Hazard pictograms (GHS-US):

GHS07

GHS08

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
H335 - May cause respiratory irritation
H350 - May cause cancer (inhalation)
H372 - Causes damage to organs (lung/Respiratory system) through prolonged or repeated exposure (inhalation)

Precautionary statements (GHS-US):
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER/doctor if you feel unwell
P308+P313 - IF Exposed of concerned: Get medical advice/attention
P314 - Get medical advice and attention if you feel unwell
P264 - Wash hands and forearms thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
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2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>(CAS No.) 14808-60-7</td>
<td>99 - 100</td>
<td>Carc. 1A, H350, STOT SE 3, H335, STOT RE 1, H372</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general: If medical advice is needed, have product container or label at hand.
First-aid measures after inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.
First-aid measures after skin contact: Rinse immediately with plenty of water. Gently wash with plenty of soap and water. Obtain medical attention if irritation persists.
First-aid measures after eye contact: Immediately rinse with water for a prolonged period while holding the eyelids wide open. Seek medical attention if material is embedded in eye. If eye irritation persists: Get medical advice and attention.
First-aid measures after ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries: Repeated or prolonged inhalation may damage lungs
Symptoms/injuries after inhalation: May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
Symptoms/injuries after skin contact: Prolonged contact with large amounts of dust may cause mechanical irritation. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/injuries after eye contact: Redness, pain.
Symptoms/injuries after ingestion: Abdominal pain.
Chronic symptoms: Respiratory difficulties. May cause cancer.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Not flammable.
Explosion hazard : No particular fire or explosion hazard.
Reactivity : Hazardous reactions will not occur under normal conditions.

5.3. Advice for firefighters
Precautionary measures fire : Fight fire with normal precautions from a reasonable distance.
Firefighting instructions : Not flammable.
Protection during firefighting : Use normal individual fire protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures : Do not breathe dust. Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up.

6.1.1. For non-emergency personnel
Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. Use recommended respiratory protection.
Emergency procedures : Collect as any solid.

6.1.2. For emergency responders
No additional information available

6.2. Environmental precautions
No additional information available

6.3. Methods and material for containment and cleaning up
Methods for cleaning up : Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up.

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Additional hazards when processed : Do not breathe dust.
Precautions for safe handling : Avoid crating or spreading dust.
Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Always wash your hands immediately after handling this product, and once again before leaving the workplace. Do not eat, drink or smoke in areas where product is used.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions : Store in a dry, cool place. Keep container tightly closed.
Incompatible material : In finely divided state: reacts with (strong) oxidizers such as: hydrofluoric acid, chlorine trifluoride, oxygen difluoride, fluorine.
Storage area : Store in dry, cool area.
Special rules on packaging : Keep container closed when not in use.

7.3. Specific end use(s)
Sand for specialty applications

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Quartz (14808-60-7)
USA ACGIH ACGIH TWA (mg/m$^3$) 0.025 mg/m$^3$
USA IDLH US IDLH (mg/m$^3$) 50 mg/m$^3$
USA NIOSH NIOSH REL (TWA) (mg/m$^3$) 0.05mg/m$^3$
USA OSHA OSHA PEL (TWA) (mg/m$^3$) (30)/(% SiO$_2$) mg/m$^3$ - total dust
(10)/(% SiO$_2$) mg/m$^3$ - respirable fraction

8.2. Exposure controls
Appropriate engineering controls: Ensure adequate ventilation, especially in confined areas. Avoid dust productions.


Hand protection: Impermeable protective gloves.
Eye protection: Protective goggles.
Skin and body protection: Handle in accordance with good industrial hygiene and safety practice. Always wash your hands immediately after handling this product, and once again before leaving the workplace. Wear suitable protective clothing. Wash contaminated clothing before reuse.
Respiratory protection: Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of dust are expected to exceed exposure limits.
Consumer exposure controls: Do not breathe dust. Wear recommended personal protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid
Appearance: Crystalline solid
Color: Natural Color
Odor: Odorless
Odor threshold: No data available
pH: No data available
Relative evaporation rate (butylacetate=1): No data available
Melting point: 1710°C (3110°F)
Freezing point: No data available
Boiling point: 2230°C (4046°F)
Flash point: No data available
Self-ignition temperature: No data available
 Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: No data available
Relative vapor density at 20°C: No data available
Density: 2.65 (approximately)
Solubility: Water: Insoluble
Log Pow: No data available
Log Kow: No data available
Explosive properties: None known
Oxidizing properties: None known
Explosive limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Hazardous reactions will not occur under normal conditions.

10.2. Chemical stability
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Stable under normal temperature and pressure.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
Avoid strong oxidizers.

10.6. Hazardous decomposition products
Quartz (silica) will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetrafluoride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified
Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer (inhalation)

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
</tr>
<tr>
<td>National Toxicity Program (NTP) Status</td>
</tr>
</tbody>
</table>

| Reproductive toxicity | : Not classified |
| Specific target organ toxicity (single exposure) | : May cause respiratory irritation |
| Specific target organ toxicity (repeated exposure) | : Causes damage to organs (lungs/respiratory system) through prolonged or repeated exposure (inhalation) |

<table>
<thead>
<tr>
<th>Silica Sand, All Grades (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Information</td>
</tr>
<tr>
<td>Aspiration hazard</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability
Silica Sand, All Grades (14808-60-7)
Persistence and degradability : Not readily biodegradable

12.3. Bio accumulative potential
Silica Sand, All Grades (14808-60-7)
Bio accumulative potential : Not expected to bio accumulate

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods
Regional legislation (waste) : Disposal must be done according to official regulations
Waste disposal recommendations : Nonhazardous waste
SECTION 14: Transport information

In accordance with DOT/TDG/ADR/RID/ADNR/IMDG/ICAO/IATA

14.1. UN number
No dangerous good in sense of transport regulations

14.2. UN proper shipping name
Not applicable

14.3. Overland transport
No additional information available

14.4. Transport by sea
No additional information available

14.5. Air transport
No additional information available

14.6. Additional information
Other information : No supplementary information available

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Silica Sand, All Grades (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 311/312 Hazard Classes</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

15.2.1. Canada

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the Canadian DSL (Domestic Substances List) inventory.</td>
</tr>
<tr>
<td>WHMIS Classification</td>
</tr>
</tbody>
</table>

15.2.2. National regulations

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on IARC (International Agency for Research on Cancer)</td>
</tr>
<tr>
<td>Listed on carcinogen on NTP (National Toxicology Program)</td>
</tr>
</tbody>
</table>

15.3. US State regulations

<table>
<thead>
<tr>
<th>Quartz (14808-60-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogen</td>
</tr>
<tr>
<td><strong>WARNING!</strong> This product contains Quartz, a substance known to the State of California to cause cancer.</td>
</tr>
<tr>
<td>U.S. - Hawaii - Occupational Exposure Limits - TWAs</td>
</tr>
<tr>
<td>U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations</td>
</tr>
<tr>
<td>U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)</td>
</tr>
<tr>
<td>U.S. - Idaho - Occupational Exposure Limits - Mineral Dusts</td>
</tr>
<tr>
<td>U.S. - Illinois - Toxic Air Contaminant Carcinogens</td>
</tr>
<tr>
<td>U.S. - Main - Chemicals of High Concern</td>
</tr>
<tr>
<td>U.S. - Massachusetts - Rights To Know List</td>
</tr>
<tr>
<td>U.S. - Michigan - Occupational Exposure Limits - TWAs</td>
</tr>
<tr>
<td>U.S. - Minnesota - Chemicals of High Concern</td>
</tr>
<tr>
<td>U.S. - Minnesota - Hazardous Substance List</td>
</tr>
<tr>
<td>U.S. - Minnesota - Permissible Exposure Limits - TWAs</td>
</tr>
<tr>
<td>U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour</td>
</tr>
<tr>
<td>U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual</td>
</tr>
</tbody>
</table>
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U.S. - New Jersey - Special Health Hazards Substances List
U.S. - Oregon - Permissible Exposure Limits - Mineral Dusts
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs

SECTION 16: Other information

NFPA health hazard : 2 – Intense of continued exposure could cause temporary
incapacitation of possible residual injury unless prompt medical
attention is given
NFPA fire hazard : 0 – Materials that will not burn
NFPA reactivity : 0 – Normally stable, even under fire exposure conditions, and are
not reactive with water

HMIS III Rating
Health : 2* Moderate Hazard – Temporary or minor injury may occur
Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard
Personal Protection : E

Full text of H-phrases:

<table>
<thead>
<tr>
<th>Carc. 1A</th>
<th>Carcinogenicity Category 1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOT RE 1</td>
<td>Specific target organ toxicity (repeated exposure) Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
</tbody>
</table>

SDS CAS No. 14808-60-7

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