



# SAFETY DATA SHEET – Preferred Coated Infill (All Grades) XIF-00

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	Product identifier (CAS)	% (w/w)	Classification (GHS-US)
Silica Sand (Quartz)	14808-60-7	98.0-99.5%	Carc. 1A, STOT SE 3, STOT RE 1
Polymer Resin		0.5-2.0%	Not a hazardous substance and bound to silica

## 4. FIRST AID MEASURES

<u>Description of First Aid Measures</u>	
<b>General:</b>	Immediately flush eyes with running water for at least 15 minutes. Seek medical attention for irritation.
<b>Inhalation:</b>	Wash with soap and water.
<b>Skin Contact:</b>	Move to fresh air. Seek medical attention if irritation develops.
<b>Eye Contact:</b>	Rinse mouth with water. Get medical attention if discomfort persists.
<b>Ingestion:</b>	Treat symptomatically.

<u>Most Important Symptoms and Effects Both Acute and Delayed</u>	
<b>Symptoms/Injuries:</b>	Irritation by abrasion of respiratory tract.
<b>Symptoms/Injuries After Inhalation:</b>	Chronic inhalation of respirable quartz (crystalline silica) may cause silicosis, a fibrosis or scarring of the lungs. Silicosis may be progressive and may lead to disability and death. Adverse health effects such as lung disease, silicosis, cancer, autoimmune disease, tuberculosis and nephrotoxicity can occur with exposure. There are generally no symptoms or signs of exposure to quartz. Chronic silicosis often has no symptoms. Acute silicosis can occur with exposures to very high concentrations of respirable quartz over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is fatal.
<b>Symptoms/Injuries After Skin Contact:</b>	Prolonged contact with dust may cause irritation by abrasion.
<b>Symptoms/Injuries After Eye Contact:</b>	Prolonged contact will cause irritation by abrasion and may result in corneal injury.
<b>Symptoms/Injuries After Ingestion:</b>	None expected under normal conditions of use.
<b>Chronic Symptoms:</b>	Prolonged and frequent exposure through inhalation may cause cancer or damage lungs.
<b>Indication of Any Immediate Medical Attention and Special Treatment Needed</b>	If you feel unwell, seek medical advice.

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## 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Agents</b>	Use extinguishing media appropriate for surrounding fire.
<b>Unsuitable Extinguishing Agents</b>	None known
<b>Products of Combustion</b>	None anticipated

<b>Advice for Firefighters</b>	
<b>Precautionary Measures Fire</b>	Exercise caution when fighting any fire
<b>Firefighting Instructions</b>	Fight fire from safe distance and protected location.
<b>Hazardous Combustion Products</b>	May release toxic fumes, including Formaldehyde, Silicon Oxides, and Carbon Oxides
<b>Protection of Firefighters</b>	Fire fighters should wear “bunker gear” and Self-Contained Breathing Apparatus (SCBA).

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Do not breathe dust. Avoid generating dust.
<b>Environmental Precautions</b>	Not available

<b>For Non-Emergency Personnel</b>	
<b>Protective Equipment:</b>	Use appropriate personal protection equipment (PPE).
<b>Method of Cleanup</b>	Shovel into containers for reuse. Do not use product contaminated with dirt, water or other materials. Contaminated materials should be disposed of in a suitable facility.

<b>Methods and Material for Containment and Cleaning Up</b>	
<b>For Containment:</b>	Use appropriate personal protection equipment (PPE).
<b>Methods for Cleaning Up:</b>	Avoid generation of dust during clean-up of spills. Use only non-sparking tools.

<b>Reference to Other Sections</b>	See Section 8, Exposure Controls and Personal Protection.
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## 7. HANDLING AND STORAGE


<b>Additional Hazards When Processed:</b>	Good housekeeping is needed during storage, transfer, handling, and use of this material to avoid excessive dust accumulation.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety procedures. Use only outdoors or in a well-ventilated area. Do not breathe dust.
<b>Storage Conditions</b>	Store in a well-ventilated place.
<b>Incompatible Materials</b>	Strong bases. Strong acids. Strong oxidizers.
<b>Specific End Use(s)</b>	Proppant. For professional use only.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Quartz (14808-60-7) (Respirable dust only)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (STEL) (mg/m <sup>3</sup> )	250 mppcf/%SiO <sub>2</sub> +5, 10mg/m <sup>3</sup> /%SiO <sub>2</sub> +2
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	300 particle/mL
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup>

Particles Not Otherwise Specified		
USA OSHA	OSHA PEL (TWA)(mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (total dust)
USA OSHA	OSHA PEL (TWA)(mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (respirable fraction)
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total dust)
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (respirable fraction)

<b>Appropriate Engineering Controls</b>	Ensure adequate ventilation, especially in confined areas.
<b>Personal Protective Equipment</b>	 Insufficient ventilation: wear respiratory protection.
<b>Materials for Protective Clothing</b>	Specific materials not required.
<b>Hand Protection</b>	Impermeable protective gloves.
<b>Eye Protection</b>	In case of dust production: protective goggles.
<b>Skin and Body Protection</b>	Wear suitable working clothes.
<b>Respiratory Protection</b>	Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of dust are expected to exceed exposure limits.
<b>Other Information</b>	When using, do not eat, drink or smoke

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid	<b>Flash point</b>	Not flammable
<b>Appearance</b>	Grayish/Black, Green or Red Granular Sand	<b>Upper/lower Flammable Limits</b>	Not available
<b>Odor</b>	Odorless	<b>Auto-ignition Temperature</b>	Not available

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<b>Odor Threshold</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>pH</b>	Not applicable	<b>Relative Evaporation Rate (butyl acetate=1)</b>	Not available
<b>Boiling Point</b>	2230 C	<b>Vapor Pressure</b>	Negligible
<b>Melting/Freezing Point</b>	2930 °F (1610 °C)	<b>Relative Vapor Density at 20 °C</b>	Not available
<b>Solubility</b>	Insoluble in water	<b>Density</b>	2.5 (vs water)
<b>Viscosity</b>	Not available	<b>Octanol/Water Partition Coefficient</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Relative Density/Specific Gravity</b>	Not available
<b>Explosion Data – Sensitivity to Mechanical Impact</b>	Not expected to present an explosion hazard due to mechanical impact.	<b>Explosion Data – Sensitivity to Static Discharge</b>	Not expected to present an explosion hazard due to static discharge.

Note: The physical data presented above are typical values and should not be construed as a specification.

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Product is stable.
<b>Chemical Stability:</b>	Product is not explosive.
<b>Conditions to Avoid:</b>	Sparks, heat, open flame and other sources of ignition. Avoid creating or spreading dust.
<b>Possibility of Hazardous Reactions:</b>	Hazardous polymerization will not occur.
<b>Incompatible Materials:</b>	Strong acids, strong bases, strong oxidizers.
<b>Hazardous Decomposition Products:</b>	Quartz (silica) will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetrafluoride.

## 11. TOXICOLOGICAL INFORMATION

No investigations were carried out with the preparation itself. The properties of this product which are hazardous to health have been calculated as per regulation (EC) No. 1272/2008. See Section 2 "Hazards Identification.	
<b>Acute Toxicity</b>	Not classified
<b>LD50 and LC50 Data:</b>	Not available but considered systemically non-toxic.
<b>Skin Corrosion/Irritation</b>	Not classified (pH: 6.5 - 7.5) in solution
<b>Serious Eye Damage/Irritation</b>	Not classified (pH: 6.5 - 7.5) in solution
<b>Respiratory or Skin Sensitization</b>	Not classified
<b>Germ Cell Mutagenicity</b>	Not classified

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<b>Teratogenicity</b>	Not available
<b>Carcinogenicity</b>	May cause cancer (Inhalation).
<b>Specific Target Organ Toxicity (Repeated Exposure)</b>	Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation).
<b>Reproductive Toxicity</b>	Not classified
<b>Specific Target Organ Toxicity (Single Exposure)</b>	May cause respiratory irritation by abrasion.
<b>Aspiration Hazard</b>	Not classified
<b>Symptoms/Injuries After Inhalation</b>	May cause respiratory irritation. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.
<b>Symptoms/Injuries After Skin Contact</b>	Prolonged contact with large amounts of dust may cause irritation by abrasion.
<b>Symptoms/Injuries After Eye Contact</b>	Repeated or prolonged contact will cause irritation by abrasion. Prolonged contact may result in corneal injury.
<b>Symptoms/Injuries After Ingestion</b>	None expected under normal conditions of use.
<b>Chronic Symptoms</b>	Prolonged and frequent exposure through inhalation may cause cancer. Repeated or prolonged inhalation may damage lungs.

<b>Information on Toxicological Effects - Ingredient(s)</b>	
<b>LD50 and LC50 Data:</b>	
<b>Quartz (14808-60-67)</b>	
<b>Oral Rat</b>	> 5000mg/kg
<b>Quartz (14808-60-7)</b>	
<b>IARC Group</b>	1
<b>National Toxicity Program(NTP) Status</b>	Known Human Carcinogens.

## 12. ECOLOGICAL INFORMATION

<b>Toxicity</b>	Not classified
<b>Persistence and Degradability</b>	Not available
<b>Bio-accumulative Potential</b>	Not available
<b>Other Adverse Effects</b>	Not available

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## 13. DISPOSAL CONSIDERATIONS

<b>Waste Disposal Recommendations:</b>	Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.
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## 14. TRANSPORT INFORMATION

<b>In Accordance with DOT</b>	Not regulated for transport
<b>In Accordance with IMDG</b>	Not regulated for transport
<b>In Accordance with IATA</b>	Not regulated for transport
<b>In Accordance with TDG</b>	Not regulated for transport

## 15. REGULATORY INFORMATION

### US Federal Regulations

<b>Quartz (14808-60-7)</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Carcinogen 1A. STOT SE -3. STOT RE-1
<b>TSCA (Toxic Substances Control Act)</b>	Listed on the United States TSCA inventory

### US State Regulations

<b>Quartz (14808-60-7)</b>	
U.S. - California - Proposition 65 – Carcinogens - Listed	
RTK - U.S. - Massachusetts - Right To Know List	
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List	
RTK - U.S. - Pennsylvania - RTK (Right to Know) List	

### Canadian Regulations

<b>WHMIS Classification 2015</b>	Carcinogen 1A. STOT SE -3. STOT RE-1
<b>Quartz (14808-60-7)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
Listed on the Canadian Ingredient Disclosure List	

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

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## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date	25 May 2021
Version	1.3
Former Version Date	23 Mar 2021
Revision Changes	Item number changed from XIF-002 to XIF-003

National Fire Protection Association (NFPA):		
NFPA Health Hazard	1	Exposure could cause irritation by abrasion but only minor residual injury even if no treatment is given.
NFPA Flammability	0	Materials that will not burn.
NFPA Reactivity	0	Normally stable, even under fire exposure conditions

Hazardous Material Identification System (HMIS):		
Health	1	Slight Hazard - Irritation by abrasion or minor reversible injury possible
Flammability	0	Minimal Hazard
Physical	0	Minimal Hazard
PPE	E	
Ratings are based on 0-4 rating scale, with 0 representing minimal hazard or risk, and 4 representing severe hazard or risk.		
E: Safety goggles, gloves and a particulate respirator		

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