SAFETY DATA SHEET

Section 1: Identification

Product Name: Armorstone
Date of Origination: March 19, 2026
Recommended Use: Surface coating, overlay aggregate. Use with adequate ventilation.
Chemical Form: Crystalline Silica, Cristobalite
Chemical Name: SiO2
Synonyms: Crushed granite, Silicon dioxide
Company/Manufacturer/Supplier: Washington Rock Quarries, Inc.
Emergency Phone Number: 253-262-1661

Section 2: Hazard Identification and Classification (GHS)

Signal Word: Danger. Respirable crystalline may cause cancer and lung damage (silicosis or pulmonary fibrosis) through prolonged or repeated inhalation of silica dust. Crystalline silica is an IARC group 1 carcinogen. Hazard classification category 1.

Hazard Statements:

H350i: May cause cancer by inhalation.
H372: Causes damage to lungs through prolonged or repeated exposure by inhalation.
H335: May cause respiratory irritation.

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 thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/eye protection/face protection.
P284: Wear respiratory protection.

Section 3: Composition/ Information on Ingredients

Component	Synonym	CAS#	EINECS#	Conc.
Crystalline Silica	α-Quartz, Quartz, SiO_2, Silica	14808-60-7	238-878-4	40.9%
Cristobalite Silica	Quartz, SiO_2, Silica	14464-46-1	238-455-4	5.0%
Tridymite Silica	Quartz, SiO_2, Silica	15468-32-3	239-487-1	<0.1%

Section 4: First-Aid Measures

Inhalation: Move to fresh air. Seek medical attention if symptoms persist.
Skin Contact: Wash with soap and water.
Eye Contact: Rinse cautiously with water for 15 minutes.

Section 5: Fire-Fighting Measures

Suitable extinguishing media: Not flammable or combustible. No hazardous combustion products from silica. **Firefighters: standard PPE.**

Section 6: Accidental Release Measures

Contain and clean up, avoiding dry sweeping and the creation of dust. Use a hose to wet the grit and avoid airborne dispersion or use a high-efficiency particulate air (HEPA) vacuum.

Section 7: Handling and Storage

Handling: Avoid breathing dust. Do not use compressed air to clean clothing. Wash hands after use. Do not eat, drink, or use tobacco products when handling this product.
Storage: Keep container tightly closed to prevent airborne dispersion.

Section 8: Exposure Controls/Personal Protection

Chemical Name	OSHA and MSHA PEL (TWA)	NIOSH REL (TWA)	ACGIH OEL (TWA)
Respirable Crystalline Silica (quartz, cristobalite, and/or tridymite)	0.05 mg/m^3	0.05 mg/m^3	0.025 mg/m^3

*TWA (Time-weighted average) is over an 8-hour workday. The OSHA action level is 0.025 mg/m^3 which triggers expanded monitoring and other regulatory requirements.

Engineering controls: Avoid creating dust by using water spray as a dust suppressant. Local exhaust ventilation with a HEPA filter may also be used.
General protective and hygienic measures: For protection against dust inhalation, use a NIOSH approved N-95 filtering facepiece or a half-face respirator with at least a P95 cartridge.
Protection of hands: Use work gloves (ANSI abrasion level 4) to protect hands from abrasion.
Eye protection: Safety glasses with side shields are recommended if material becomes airborne.

Section 9: Physical and Chemical Properties

Physical State: Gray hard granules.
Odor: No odor.
pH: Not applicable.
Molecular weight: 60.1 (SiO_2).
Melting point/melting range: 573°C for crystalline silica; 1,713°C for Cristobalite.
Boiling point/boiling range: 2,230°C.
Flash point: Not flammable.
Evaporation rate: Does not evaporate.
Flammability: Not flammable.
Upper/lower flammability or explosive limits: Not flammable or combustible.
Auto ignition temperature: Not combustible.
Danger of explosion: Not flammable or combustible.
Vapor pressure: Not applicable at standard temperature and pressure.
Specific Density (unitless) at 20° C: 2.648 for α-silica; 2.334 for cristobalite.
Solubility in water at 20°: Insoluble in water but will dissolve in hydrofluoric acid.

Section 10: Stability and Reactivity

Reactivity: Silica reacts with hot concentrated sodium hydroxide to form sodium silicate and water. Silica reacts with hydrofluoric acid to produce silicon tetrafluoride (SiF_4), a corrosive gas, and water.
Chemical stability: Stable.
Conditions to avoid: None known.
Incompatible materials: Strong oxidizers, hydrofluoric acid.
Hazardous decomposition products: Material is not likely to decompose.
Hazardous polymerization: Will not occur.

Section 11: Toxicological Information

Acute toxicity: LD50 (oral rat): >22,500 mg/kg.

Potential routes of exposure/potential health effects:
Skin: None known.
Eye: Contact may cause mechanical irritation.
Inhalation: Inhalation of dust may cause lung cancer. Inhalation of dust may cause silicosis, a progressive and disabling lung disease. This disease is exacerbated by smoking.
Chronic health effects: Breathing in respirable crystalline silica particles for a prolonged period that exceeds the OSHA exposure limit can cause silicosis, an incurable lung disease that leads to disability and death. Respirable crystalline silica also causes lung cancer, chronic obstructive pulmonary disease (COPD), and kidney disease. Exposure to respirable crystalline silica is related to the development of autoimmune disorders and cardiovascular impairment.
Carcinogenicity: Crystalline Silica is an IARC Category 1, known human carcinogen; ACGIH group 1A, confirmed human carcinogen, and an NTP: Known human carcinogen.
Ingestion: None known.
Mutagenic effects: None known.
Reproductive toxicity: None known.
Sensitization: None known.
Target organs: Lungs.
Signs and symptoms of exposure: Silica causes inflammation and scarring in the lungs, called silicosis. Symptoms may include cough, fatigue, shortness of breath, and chest pain.

Section 12: Ecological Information

Ecotoxicity: This product is not expected to be ecotoxic. It is an insoluble mineral. No bioaccumulation is expected.
Persistence and degradability: No data available.
Bioaccumulation potential: No data available.
Mobility in soil: No data available.
Other adverse effects: No data available.

Section 13: Disposal Considerations

Waste Disposal: Silica is not considered a hazardous waste under U.S. EPA RCRA regulations. If uncontaminated, dispose of waste product according to your state requirements. Waste product should be contained so as to not release dust.

Section 14: Transport Information

DOT regulations: Silica is not classified as a dangerous good for transport. Follow general packaging requirements (49 CFR) to avoid release of dust.

Section 15: Regulatory Information

US Federal Regulations

OSHA 29 CFR 1910.1053; 1926.1153

MSHA 30 CFR Part 60

SARA Section 355 (extremely hazardous substances): Not listed.

SARA Section 313 (specific toxic chemical listings): Not listed.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs): Not listed.

TSCA (Toxic Substances Control Act): Listed on the TSCA active inventory.

REACH: No requirement for registration.

Section 16: Other Information

SDS date of preparation/update: March 19, 2026