

FEATURES & BENEFITS

CERASIL® Ceramic Grade Ground Silica is produced from high purity crystalline silica feedstock for the formulation and manufacture of ceramic whitewares, enamels and glazes.

When incorporated in ceramic bodies, CERASIL will reduce shrinkage during drying, increase the body's coefficient of thermal expansion, and help add plasticity to the finished product. CERASIL reacts during firing with other formula constituents to develop a lattice-like structure that strengthens the body while providing an exit for evolved gasses. In ceramic glazes and enamels, CERASIL will help regulate the melting point and control melt viscosity. The infusion of silica in the glaze will decrease its thermal expansion and, improve the glaze to body fit for greater craze resistance.

All CERASIL grades are processed with rigid adherence to the Covia QIPsm statistical quality assurance program. Statistical control of grain distribution and the absence of "large" particles insure that CERASIL will be completely fused during vitrification. Chemical purity and consistency guarantee that CERASIL will fire white with predictable and repeatable results.

PARTICAL SIZE ANALYSIS

Typical Mean Values. These Do Not Represent A Specification.

	Mesh Size		CERASIL® Grades	
	ASTM	MICRONS	325	200
Typical mean % retained on individual sieves	70	212	—	—
	100	150	—	tr
	140	106	0.4	1.8
	200	75	1.3	6.1
	325	45	2.3	6.7
% Finer than	325	45	96.0	85.3
Median Particle Size D50 (μ)	D50		n/a	n/a
Surface Area (m ² /g) BET			1.325	0.992

PHYSICAL PROPERTIES

Typical Mean Values. These Do Not Represent A Specification.

CERASIL® Ceramic Flint		
Specific Gravity (g/cm ³)	2.65	ASTM C-128
Moisture Content (%)	<0.1	ASTM C-566
Fusion Point (Pyrometric Cone)	32.5	ASTM C-24
Melting Point (°F/°C)	3135/1724	ASTM C-24
pH (%)	4.5-5.0	ASTM C-113-87-S
Bulk Density, loose (lb/ft ³)	65-70	ASTM C-29
Bulk Density, compacted (lb/ft ³)	85-90	ASTM C-29

CHEMICAL ANALYSIS

Typical Mean Values. These Do Not Represent A Specification.

Typical Mean Percent By Weight	
Silicon Dioxide (SiO ₂)	99.59
Aluminum Oxide (Al ₂ O ₃)	0.22
Titanium Dioxide (TiO ₂)	0.01
Iron Oxide (Fe ₂ O ₃)	0.03
Calcium Oxide (CaO)	0.01
Magnesium Oxide (MgO)	0.01
Potassium Oxide (K ₂ O)	0.01
Sodium Oxide (Na ₂ O)	0.01
Loss on Ignition (LOI)	0.11

SHIPPING/ORDERING INFORMATION

- Shipping Point: Marston, NC
- Originating Carrier: CSX Railroad
- Availability: Bulk Only
Truck and Rail

CUSTOMER SERVICE

US & Canada: 1-800-243-9004

Fax: 1-800-243-9005

Worldwide: 1-203-442-2500

Fax: 1-203-972-1378

3 Summit Park Drive, Suite 700, Independence, OH 44131 | CoviaCorp.com

GRADE NUMBERS INDICATE RELATIVE VALUES OR RESULTS. THEY ARE NOT A SPECIFICATION OR WARRANTY OF PERFORMANCE.

HEALTH HAZARD WARNING: Prolonged inhalation of dust associated with the materials described in this data sheet can cause delayed lung injury including Silicosis, a progressive, disabling and sometimes fatal lung disease. IARC and NTP have determined that crystalline silica can cause lung cancer in humans. Risk of injury is dependent on the duration and level of exposure. Follow OSHA or other relevant safety and health standards for the form of crystalline silica called Quartz. Current safety data sheet, containing safety information, is available and should be consulted before usage.

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Silica/Silica Containing

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