

## FEATURES & BENEFITS

SILVERBOND® Ground Crystalline Silica is produced from a high purity quartz feed stock for manufacturing and formulation of applications which require structurally sound, chemically pure or nonreactive fine mineral fillers.

Completely inert and pH neutral, SILVERBOND will not alter or initiate when incorporated in catalyzed or multi-component chemical systems, and will not degrade when employed in extreme temperatures or harsh environments. SILVERBOND's low surface area and hardness offers a minimal oil absorption for high loading and stiffening of elastomers, high performance epoxies and cementitious systems. Chemically pure SILVERBOND also serves as an excellent nonconductor in electrical assemblies and potting compounds, and a noncombustible filler in thermal insulating or fire retardant applications.

All SILVERBOND grades are processed with rigid adherence to Covia QIP<sup>SM</sup> statistical and quality assurance programs. The result is chemical purity and consistently uniform particle size distributions for predictable results and reliable service.

## PARTICAL SIZE ANALYSIS

*Typical Mean Values. These Do Not Represent a Specification.*

	Mesh Size		SILVERBOND® Grades		
	ASTM	MICRONS	200	270	325
Typical mean % retained on individual sieves	70	212	—	—	—
	100	150	0.1	—	—
	140	106	1.4	0.6	—
	200	75	6.5	3.5	—
	270	53	12.8	10.8	—
	325	45	7.8	7.5	4.5
	<325	<45	71.4	77.5	95.5
Subsieve Analysis % passing on individual screens	—	20	45.7	49.0	68.1
	—	10	25.8	27.6	39.4
	—	5	13.9	14.8	21.0
	—	2	5.3	5.6	8.1
Median Particle Size (µm)	D50		22.3	20.7	13.3
Surface Area, Blaine (cm <sup>2</sup> /g)	ASTMC-204		1.01	1.11	1.44
Oil Absorption (lb/100#)	ASTMD-1483		24.8	26.6	27.1
Reflectance, Dry	Spectrophotmetric				
	Blue	73.6	74.0	n/a	77.7
	Green	78.8	79.8	n/a	83.1
	Amber	80.0	80.6	n/a	84.1
Powder Brightness (R457)	—	—	76.4	76.6	79.3

## PHYSICAL PROPERTIES

Typical Mean Values. These Do Not Represent a Specification.

SILVERBOND® Ground Crystalline Silica		
pH (20% slurry)	7.8	AFS 113-87-S
Specific Gravity (g/cm <sup>3</sup> )	2.65	ASTM C-128
Moisture Content (%)	<0.1	ASTM C-566
Bulk Density, loose (lb/ft <sup>3</sup> )	65-70	ASTM C-29
Bulk Density, compacted (lb/ft <sup>3</sup> )	85-90	ASTM C-29
Melting Point (°F/°C)	3135-1724	ASTM C-24
Fusion Point (Pyrometric Cone)	32.5	ASTM C-24

## CHEMICAL ANALYSIS

Typical Mean Values. These Do Not Represent a Specification.

	Typical Mean Percent by Weight		
	200	270	325
Silicon Dioxide (SiO <sub>2</sub> )	98.88	98.87	99.24
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	0.02	0.02	0.02
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	0.04	0.04	0.04
Calcium Oxide (CaO)	0.04	0.04	0.04
Titanium Dioxide (TiO <sub>2</sub> )	0.56	0.57	0.57
Magnesium Oxide (MgO)	0.02	0.02	0.02
Potassium Oxide (K <sub>2</sub> O)	0.28	0.28	0.27
Sodium Oxide (Na <sub>2</sub> O)	0.03	0.03	0.03
Loss on Ignition (LOI)	0.13	0.14	0.16

## SHIPPING/ORDERING INFORMATION

- Shipping Point: Cleburne, TX
- Availability: Bulk Only  
Truck Only

### CUSTOMER SERVICE

US & Canada: 1-800-243-9004

Fax: 1-800-243-9005

Worldwide: 1-203-442-2500

Fax: 1-203-972-1378

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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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