

## 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, 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's 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	325
Typical mean % retained on individual sieves			85% passing	96% passing
	70	212	--	--
	100	150	tr	--
	200	75	1.8	0.4
	270	53	6.1	1.3
	325	45	6.7	2.3
% Finer Than	<325	<45	85.3	96.0
Subsieve Analysis % Passing on Individual Screens				
	--	20	61.8	69.3
	--	10	35.2	39.6
	--	5	19.3	21.1
	--	2	8.1	8.6
Median Particle Size (µm)	D50		15.2	13.1
Surface Area, (m <sup>2</sup> /g)	BET		0.992	1.325
Oil Absorption (lb/100#)	ASTM D-1483		28-30	25-26
Reflectance, Dry	Spectrophotometric			
	Blue		89.6	88.8
	Green		86.6	86.6
	Amber		87.5	86.5
Powder Brightness (R457)	--	--	85.0	87.0

## PHYSICAL PROPERTIES

Typical Mean Values. These Do Not Represent a Specification.

SILVERBOND® Ground Crystalline Silica		
pH (20% slurry)	4.5-5.0	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

## CHEMICAL ANALYSIS

Typical Mean Values. These Do Not Represent a Specification.

Typical Mean Percent by Weight	
Silicon Dioxide (SiO <sub>2</sub> )	99.59
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	0.03
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	0.22
Calcium Oxide (CaO)	0.01
Titanium Dioxide (TiO <sub>2</sub> )	0.03
Magnesium Oxide (MgO)	0.01
Potassium Oxide (K <sub>2</sub> O)	0.01
Sodium Oxide (Na <sub>2</sub> 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.

Notice: While information contained herein is correct to the best of our knowledge, Covia hereby disclaims any warranties as to the accuracy of the same. Recommendations or suggestions are made without guarantee or representation as to result, since conditions of usage are beyond our control. All materials are sold subject to Covia's standard terms and conditions of sale and the condition that buyer shall make his own tests to determine the suitability of such product for buyer's purpose. No statement contained herein shall be construed as a recommendation to infringe any patent.

Silica/Silica Containing

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