

# Protect Devices from Electrostatic Discharge with CoorsTek Specialty ESD-Safe Ceramics

## Leaders in Technical Ceramics

The largest technical ceramics manufacturer in North America, CoorsTek provides innovative ESD-Safe ceramic components for technology leaders around the globe.

## ESD-Safe From the Ground Up!

Developed specifically to protect sensitive microelectronic components from Electrostatic Discharge (ESD), CoorsTek StatSafe™ and CeraStat® ESD-Safe Ceramics help prevent the accumulation of static electricity. These static-dissipative products are ideal for use in semiconductor, data storage, aerospace, and electronics industries. Typical applications include:

- End effectors
- ESD sensitive component handling
- Data storage components
- Data storage manufacturing tools

## Superior Quality

Our signature OpX™ quality and manufacturing excellence system combines best-practice methods including lean manufacturing, six-sigma, and ISO-certification to ensure high-quality products, on-time delivery, and exceptional service.

## Advanced, ESD-Safe Technical Ceramics

Our specialized StatSafe alumina and silicon carbide and our CeraStat zirconia combine excellent static-dissipation characteristics with the superior mechanical properties of advanced ceramics:

- Tailorable volume resistivity (CeraStat ZZ only)
- Superior surface finish
- High stiffness
- Excellent wear and corrosion resistance
- Low thermal expansion
- Dimensional stability

## Design Services and Manufacturing Capabilities

CoorsTek engineers will help you select the best material and design configuration for your application. We offer a variety of forming processes including injection molding, dry pressing, isostatic forming, and extrusion to ensure high-quality, low-cost manufacturing.

## Immediate Service

Call our ESD-Safe Ceramics Experts today at **303.277.4259** or e-mail [esdsafe@coorstek.com](mailto:esdsafe@coorstek.com).



ESD-Safe Material Properties		Static Dissipative Ceramics			
		Alumina	Zirconia	Silicon Carbide	
		StatSafe™ ADC Al <sub>2</sub> O <sub>3</sub>	CeraStat® ZZ	StatSafe™ SC-DS Direct Sintered SiC	PureSiC® LR (Low Resistivity) CVD SiC
Property	Units				
Color	–	Black	Yellow/Green	Black	Black
Volume Resistivity	ohm • cm	10 <sup>8</sup> - 10 <sup>10</sup>	10 <sup>4</sup> - 10 <sup>11</sup>	10 <sup>8</sup> - 10 <sup>9</sup>	0.01 - 0.1
Density	gm/cc	3.85	6	3.15	3.21
Modulus of Elasticity	GPa	370	192	410	434
Flexural Strength	MPa	300	1000	480	517
Thermal Conductivity	W/m °K	25	5	150	115
CTE	ppm/ °C	8	9.5	4.4	4.6

The chart is intended to illustrate typical properties. Property values vary with method of manufacture, size, and shape of part. Data contained herein is not to be construed as absolute and does not constitute a representation or warranty for which CoorsTek assumes legal responsibility.

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