



ArcResist™ Engineered Coating for ESD and Secondary Electron Mitigation

The World's Leader in Engineered Ceramics

Through the unique application of custom engineering and materials expertise, CoorsTek offers a solution for enhanced device operation in applications where secondary electron buildup and electrostatic discharge (ESD) threaten your device.

Introducing ArcResist Protective Coating

ArcResist is a proprietary coating designed to change the electrical properties of ceramic components only where it is needed most – the surface.

Developed for critical electron gun, X-ray/XRF/XRD, end effector, or ESD critical applications, ArcResist retains the intrinsic insulating and mechanical bulk properties of high alumina compositions, while offering tailorable dissipative or conductive properties warranted by the application.

ArcResist makes it possible to change the surface properties without compromising bulk properties.

Classification of materials according to surface resistivity	
Insulating	$>10^{14}$
Dissipative	10^6 to 10^{13}
Conductive	$<10^6$

ESD Protection

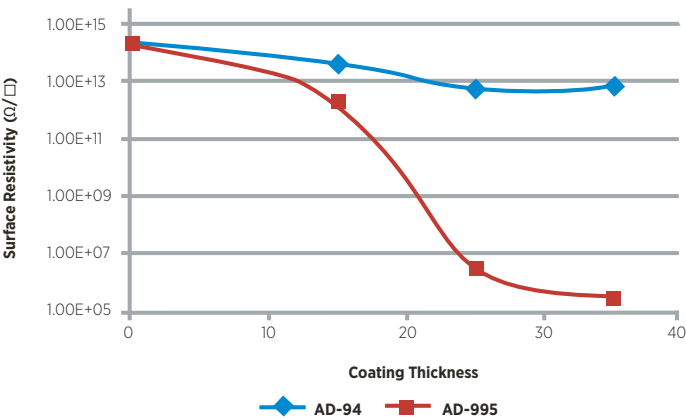
Electrostatic discharge can be a significant threat to electronic components, equipment, and personnel. To avoid the deleterious effects of ESD, treating the surface of ceramic components with a dissipative coating will slowly conduct static charges away.

Unlike a purely insulating surface on which deposited charges accumulate, ArcResist spreads these deposited charges over a larger area—allowing a gentle bleed-off of surface charge to ground while maintaining the integrity of your component design.

Prevent Secondary Electron Build-Up

When materials are bombarded by electrons—as in an electrical vacuum device—secondary electrons (delta rays) can be emitted from the atomic collisions caused by the incident beam. These charges accumulate on the surface of an insulator, forming an easy pathway for an electrical arc. ArcResist creates a means to shed these electrons, helping to avoid the loss of product due to surface arcing.

Resistance as a function of ArcResist thickness on AD-94 and AD-995



CoorsTek Design Services and Manufacturing Capabilities

Technology leaders across the globe rely on CoorsTek for unique technology and advanced materials solutions. CoorsTek engineers will help you determine the best materials and cost-effective design for your application. With facilities across three continents, CoorsTek is the international partner of choice to bring your design ideas to market.

For more information visit CoorsTek.com.

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