

New ESd Ceramic-Filled PEEK for High-Performance IC Test Sockets

CeramaPEEK® ESd Test Socket Plate

CeramaPEEK® is a proprietary ESd ceramic filled compound created to meet the requirements for tight tolerance, static dissipative, high frequency chip socket test fixtures.

Key Features of CeramaPEEK® ESd

ESd Performance: Volume & Surface Resistivity of 10^9 to 10^{12}

Exceptional dimensional stability: low moisture absorption, low creep, high modulus, metal-like CLTE, low coefficient of hygroscopic expansion

Machinable to very tight tolerances: low burring, compatible with tight pitch and fine diameter holes

Good abrasion resistance and ductility: maintains tolerances after 100,000 chip insertions, good impact properties

Very stable electrical properties: low moisture absorption and intrinsically good electrical insulator

Thermal stability: Compatible with wide temperature range, maintains physicals with after heat aging

Available in Large Plates: CeramaPEEK® is available in large 24" x 24" (610 mm x 610 mm) plates.

Economical: CeramaPEEK® is more economical than competing injection-molded products.

General	ASTM Test Method	US Value	SI Unit
Specific Gravity (lb/in ³)	D792	0.055	1.52 g/ml
Color		White	White
Moisture Absorption	D570	0.2%	0.2%
Mechanical			
Tensile Strength (Break)	D638	13,000 psi	95 MPa
Tensile Modulus	D638	670,000 psi	5 GPa
Flexural Strength (Yield)	D790	24,000 psi	154 MPa
Flexural Modulus	D790	650,000 psi	4.8 GPa
Compressive Strength	D695	17,000 psi	
Izod, Notched, Ft-lb/in @ 1/8"	D245	1.00	53 J/cm
Elongation (Break),%	D638	>10 %	>10 %
Electrical			
	ASTM Test Method	US Value	SI Unit
Dielectric Strength	D149	400 V/mil	400 V/mil
Dielectric Constant	D150	3.5 KHz @ 1 KHz	3.5 KHz @ 1 KHz
Dissipation Factor	D150	<0.0050	<0.0050
Volume Resistivity	D257	10^9 to 10^{12}	10^9 to 10^{12}
Surface Resistivity	D257	10^9 to 10^{12}	10^9 to 10^{12}
Thermal			
	ASTM Test Method	US Value	SI Unit
Melting Point, °F	DSC	645°F	341°C
HDT, method A (66 psi)	D698	>500°F	>260°C
UL94	D3801	V-0 at 0.060"	V-0 at 1.5mm
Tg	D3418	289°F	143°C
Thermal Conductivity		2 BTU-in/ft ² -hr-°F	
CTE, linear μ in/in-°F (< Tg)	E831	2×10^{-5}	$3.6 \times 10^{-5} \mu$ m/m-°C

CeramaPEEK® ESd is available exclusively from:



PROFESSIONAL PLASTICS, INC.

Serving The Semiconductor Industry Worldwide Since 1984



USA (800) 966-7767 sales@proplas.com

Asia +65 6266 6193 asia-sales@proplas.com

www.professionalplastics.com

San Jose, CA - Fullerton, CA - San Diego, CA - Sacramento, CA - Phoenix, AZ - Richardson, TX - Houston, TX
Denver, CO - Cheektowaga, NY - Kaysville, UT - Tualatin, OR - Kent, WA - Kalispell, MT - Singapore

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether expressed or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the products described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer.