

ESD - Rigid

Photopolymer Resin Material Properties

Prepared: 02.15.2024



With high tensile strength and heat deflection temperature (HDT), ESD - Rigid is ideal for producing static-dissipative parts designed to withstand the manufacturing environment.

Rigid and durable, this material can be used to 3D print parts that enable safe handling of electrical components along the production line, anti-static prototypes and end-use parts, ESD-safe electronics enclosures, and more. ESD - Rigid provides the ultimate solution for applications and workflows where ESD compliance is critical, across a broad range of industries – from electronics to medical device manufacturing.

Special Features

- Static-Dissipative
- High Tensile Strength
- High HDT
- Readable Detail
- Smooth Surface Finish

	METRIC	IMPERIAL	METHOD
TENSILE PROPERTIES			
Tensile Modulus	3300 MPa	479 ksi	ASTM D638-14
Yield Strength	61 MPa	8.8 ksi	ASTM D638-14
Ultimate Tensile Strength	99 MPa	14.4 ksi	ASTM D638-14
Elongation at Break	3.3%	3.3%	ASTM D638-14
FLEXURAL PROPERTIES			
Flexural Modulus	3500 MPa	508 ksi	ASTM D790-15*
Flexural Strength	128 MPa	18.6 ksi	ASTM D790-15*
IMPACT PROPERTIES			
Notched IZOD	23 J/m	16.96 ft-lbf/in	ASTM D256-10
TEMPERATURE PROPERTIES			
Heat Deflection Temp @ 1.80 MPa	91.4 °C	196.52 °F	ASTM D648-16
Heat Deflection Temp @ 0.45 MPa	91.3 °C	196.34 °F	ASTM D648-16
HARDNESS			
Shore D	88	88	ASTM D2240-15
RESIN PROPERTIES			
Liquid Density	1.1 g/cm ³	.0397 lb/in ³	
Liquid Viscosity @ 25°C	878.1 cP	878.1 cP	
ELECTRICAL PROPERTIES			
Surface Resistance	10 ⁷ Ω	10 ⁷ Ω	ANSI ESD S11.11
SPECIFIC GRAVITY			
	~1.1	~1.1	
WATER ABSORBTION			
	0.9%	0.9%	ASTM D570-98

All results were from models cured for 10 minutes on each side in water.
 *Specimens did not yield or break within the 5% strain limit when tested by Procedure A, the increased strain was applied (Procedure B) to induce yield and/or break within the required 5% stain limit.