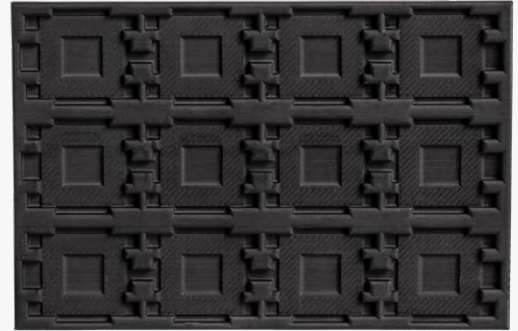


Advanced Photopolymer

# ESD Black (Loctite 3380)



This material is a high-temperature resistant resin with electrostatic dissipating (ESD) capabilities and high stiffness. Pairing it with our HPS technology results in parts that are very smooth, have an impressive chemical resistance, and a high heat deflection temperature (HDT) of 374F (190C).

## Applications

Jigs and fixtures of ESD-sensitive components; electronic manufacturing; tooling at high temperatures and low pressures.

## Key Product Benefits

- High accuracy and fine detail printing
- Displays electrostatic dissipative properties (ESD)
- Excellent stiffness and versatility

## Properties

Normal resolution: 0.004 in. (0.100mm)  
High resolution: 0.002 in. (0.050mm)

### Feature Sizes

Structural wall thickness: 0.020 in. (0.5mm)  
Supported walls (ribs, bosses, etc.): 0.010 in. (0.25mm)  
Positive features: 0.010 in. (0.25mm)  
Negative features/holes: 0.020 in. (0.5mm)

## Tolerances

For well-designed parts, tolerances of  $\pm 0.002$  in. (0.05mm) for first inch plus 0.1% of nominal length (0.001mm/mm) can typically be achieved. Note that tolerances may change depending on part geometry.

Property	Test Method	Value
Color	—	Black
Surface Resistivity*	DIN EN61340-2-3	$10^4 - 10^{11} \Omega$
Volume Resistivity*	DIN EN61340-2-3	$4 \cdot 10^6 - 24 \cdot 10^9 \Omega \cdot \text{cm}$
Density in solid state*	ASTM D1475	1.2–1.25 g/cm <sup>3</sup>
Water absorption (20 C, 50% relative humidity)*	ASTM D570	0.36%
E-module*	ASTM D638, test speed 5mm/min	2900 MPa
Tensile strength*	ASTM D638, test speed 5mm/min	45 MPa
Elongation at break*	ASTM D638, test speed 5mm/min	1.00%
Heat deflection temperature @ 0.46 MPa*	ASTM D648	356 F (180 C)
Heat deflection temperature @ 1.82 MPa*	ASTM D648	212 F (100 C)
Shore hardness*	ASTM D2240	86.5 D

\*From supplier data sheet