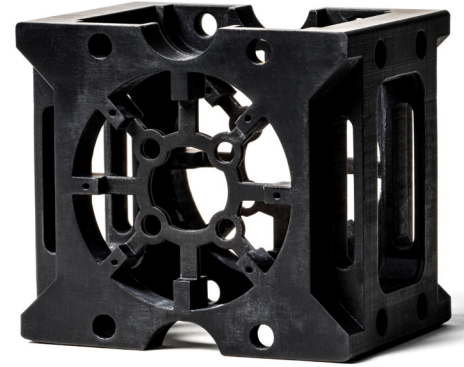


Advanced Photopolymer

# Tough Black (Loctite Henkel 3843)

Tough Black is a slow-curing, engineering-grade photopolymer with high strength, good impact resistance, and excellent surface finish. It is great for a wide range of tooling applications such as jigs, fixtures, housings, and covers.



## Applications

- High accuracy features for testing and validation
- Production grade parts with excellent throughput
- Smooth matte finish for cosmetic prototypes and production parts

## Key Product Benefits

- High-impact strength
- Semi-flexible
- Excellent and matte surface finish

## Tolerances

Expected tolerances are +/- 0.010 in. (0.25mm) for the first inch plus 0.1% of nominal length. Keep in mind that tolerances are not guaranteed on your first build of parts, however, we will work closely with you to help achieve critical dimensions. Please request critical dimensions when you upload your part, and our applications engineers will quickly review and provide feedback.

## Properties

Property	Test Method	Value
Color	—	Black
Density in solid state*	ASTM D1475	1.18 g/cm <sup>3</sup>
Water absorption (24hr)*	ASTM D570	1.94%
E-module*	ASTM D638, test speed 5mm/min	1806 +/- 47 MPa
Tensile strength*	ASTM D638, test speed 5mm/min	51 +/- 2 MPa
Elongation at break*	ASTM D638, test speed 5mm/min	43 +/- 10%
Heat deflection temperature @ 0.46 MPa*	ASTM D648	145 F (63 C)
Heat deflection temperature @ 1.82 MPa*	ASTM D648	129 F (54 C)
Flammability*	UL94	HB @ 2mm
Shore hardness*	ASTM D2240	67 (D)

\*From supplier data sheet