

LOCTITE®



Picture provided by Stratasys

LOCTITE® 3D 3172™

HDT50 High Impact
Photoplastic
Gray

LOCTITE®

Henkel Corporation

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LOCTITE®

3172™

HDT50 HIGH IMPACT
PHOTOPLASTIC
GRAY



LOCTITE 3D 3172™

LOCTITE 3D 3172 is a durable photopolymer resin that enables functional parts production where high stiffness with a good surface finish and high impact resistance are required. Parts manufactured with this resin can be machined, tapped or polished.

LOCTITE 3D 3172 is compatible with a broad range of DLP machines.



Benefits:

- Tough & durable
- Superior impact strength
- Nice surface finish, machine-able



Ideal for:

- Manufacturing aids / Jigs & Fixtures
- Housings
- Insoles



Markets:



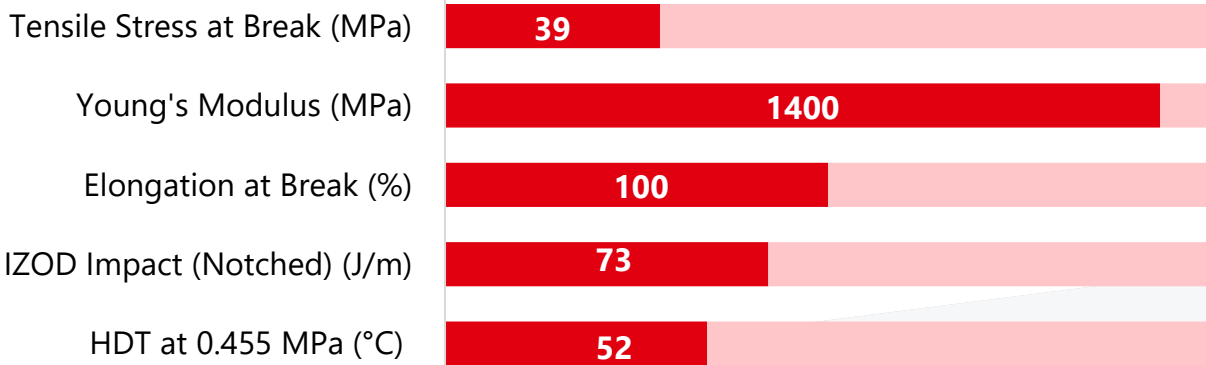
General Industry



Automotive



Consumer Goods



**Values shown are linked to LOCTITE 3D 3172 GY as reference, please refer to the specific mechanical properties for each of the colors shown in this document*



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MECHANICAL PROPERTIES

Mechanical Properties	Measure	Method	Green	Post Processed
Tensile Stress at Break	MPa	ASTM D638	32 ± 1 ^[1]	39 ± 2 ^[2]
Tensile Stress at Yield	MPa	ASTM D638	22 ± 1 ^[1]	34 ± 1 ^[2]
Young's Modulus	MPa	ASTM D638	909 ± 36 ^[1]	1494 ± 18 ^[2]
Elongation at Break	%	ASTM D638	148 ± 5 ^[1]	105 ± 14 ^[2]
Other Properties				
IZOD Impact (Notched)	J/m	ASTM D256	-	73 ± 6 ^[3]
HDT at 0.455 MPa	°C	ASTM D648	-	51 ± 0.7 ^[4]
Shore Hardness (0s, 3s)	D	ASTM 2240	65, 57 ^[5]	72, 63 ^[6]
Water Absorption (24 hr)	%	ASTM 570	-	1.5 ^[7]
Water Absorption (72 hr)	%	ASTM 570	-	2.1 ^[7]
Water Absorption (168 hr)	%	ASTM 570	-	3.1 ^[7]
Thermal Conductivity	mW/(m·K)	ASTM D5930	-	199 ^[8]
Heat Capacity	J/(g·K)	ASTM D5930	-	1.7 ± 0.1 ^[8]
Coefficient, Thermal Expansion	µm/(m·K)	ASTM E831	-	171 ± 4 ^[11]
Biocompatibility				
Cytotoxicity		ISO10993-5		Comply ^[12]
Irritation		ISO10993-23		Comply ^[13]

Liquid Properties	Measure	Method	Value
Viscosity at 25°C (77°F)	cP	ASTM D7867	1700 - 2000 ^[9]
Liquid Density	g/cm ³	ASTM D1475	1.1 ^[10]

All specimen are printed unless otherwise noted. All specimen were conditioned in ambient lab conditions at 19-23°C / 40-60% RH for at least 24 hours. ASTM Methods: D638 Type IV, 5 mm/min, D790-B, 2 mm/min, D648, D256 Notched IZOD (Machine Notched), 6 mm x 12 mm, D570 0.125" x 2" Disc 24hr@ 25°C, D2240, Type "D" (0, 3 seconds), D7867, D1475

Internal Data Sources: Test has been performed based on the in vitro method according to ISO10993-23

[1] FOR21293, [2] FOR21199, [3] FOR19120, [4] FOR19863, [5] FOR19123, [6] FOR19142, [7] FOR19125, [8] FOR26233, [9] FOR19122, [10] FOR37165, [11] FOR25783, [12] FOR40642, [13] FOR52815 (in-vitro)

