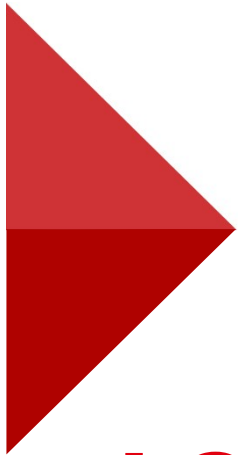


**LOCTITE®**



# **LOCTITE® 3D IND408™**

High Modulus Black  
Photoplastic Resin for SLA

**LOCTITE®**

Henkel Corporation

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## PROPERTIES

Mechanical Properties	Measure	Method	Post Processed
Tensile Stress at Break	MPa	ASTM D638	42 ± 3 <sup>[1]</sup>
Young's Modulus	MPa	ASTM D638	3240 ± 80 <sup>[1]</sup>
Elongation at Break	%	ASTM D638	1,3 ± 0,1 <sup>[1]</sup>
Flexural Stress at Break	MPa	ASTM D790	144 ± 5 <sup>[2]</sup>
Flexural Modulus	MPa	ASTM D790	3830 ± 40 <sup>[2]</sup>
IZOD Impact (Notched)	J/m	ASTM D256	16 ± 1 <sup>[3]</sup>
Shore Hardness	D	ASTM D2240	80 <sup>[8]</sup>

Thermal Properties	Measure	Method	Post Processed
HDT at 0.46 MPa	°C	ASTM D648	118 ± 1 <sup>[4]</sup>
HDT at 1.82 MPa	°C	ASTM D648	95 ± 3 <sup>[4]</sup>

Other Properties	Measure	Method	Post Processed
Viscosity at 25°C	cP	ASTM D7867	200 <sup>[6]</sup>
Water Absorption (24 h)	%	ASTM D570	0.4 <sup>[5]</sup>
Water Absorption (7 days)	%	ASTM D570	0.9 <sup>[5]</sup>
Liquid Density	g/cm <sup>3</sup>	ISO 1675	1.1 <sup>[7]</sup>
Ec	mJ/cm <sup>2</sup>	Internal	9,0
Dp	mils	Internal	6.4

\*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, 1.5 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

**Internal Data Sources:**

[1] FOR51764, [2] FOR51766, [3] FOR51768, [4] FOR51762, [5] FOR51774, [6] FOR51480, [7] FOR54345 [8] FOR57401



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## PRINTING

To achieve the properties provided the material was printed on a 355nm laser SLA printer.

## POST PROCESSING

LOCTITE 3D IND408 BK requires post processing to achieve specified properties. Prior to post curing support structures should be removed from the printed part and the part should then be washed. Use compressed air to remove residual solvent from the surface of the material between intervals.

Post Process Step	Agent	Method	Duration	Intervals	Additional Info
Cleaning	IPA	Ultrasonic bath	2 min	1	
Dry	n.a.	Compressed air	10 to 60 s	1	Air pressure (50 psi)
Wait before post curing	n.a.	Ambient condition	60 min	1	Room temperature

## POST CURING

LOCTITE 3D IND408 BK requires post curing to achieve specified properties. It is recommended that a wide spectrum lamp be used to post cure parts.

LOCTITE 3D IND408 BK requires a thermal curing cycle after UV post curing to achieve specified properties. It is recommended to place parts in a heated oven to cure the parts at 140°C for 1h.



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