

E-IND147 HDT240 High Heat

Description

E-IND147 Engineering products are high performance fluid is developed to be highly consistent with extraordinary attributes. **E-IND147** is a high temperature resistant photopolymer, and can be printed with very high resolution features (50 um). This product can be easily painted, sanded or machined for further finishing. This product should only be printed on a DLP machine.

Available Colors: Black

Mechanical Properties	Method	Green	Dymax 10/side	UV + Thermal Cure Dymax 5000: 10 min/side + 170C for 3 hours
Tensile Stress at Break	ASTM D638	30.7 ± 1.6 MPa [3]	75 ± 2.0 MPa [5]	84 ± 4.7 MPa [6]
Young's Modulus	ASTM D638	1150 ± 137 MPa [3]	3192 ± 35 MPa [5]	3285 ± 131 MPa [6]
Elongation at Failure	ASTM D638	5.9 ± 1.7 %[3]	3.0 ± 0.1 %[5]	3.2 ± 0.3 %[6]
Flexural Stress at Yield	ASTM D790	68 ± 3 MPa [12]	130 ± 11 MPa [1]	126 ± 11MPa [2]
Flexural Modulus	ASTM D790	2053 ± 189 MPa [12]	3835± 131MPa [1]	3926 ± 51 MPa [2]
Flexural Strain at Break	ASTM D790	7.6 ± 2.7 % [12]	3.1 ± 0.4 % [1]	3.2 ± 0.3 % [2]
Thermal Properties				
HDT @ 0.455 MPa DMA	Internal	56.1°C[9]	140°C[9]	237°C [10]
HDT @ 1.82 MPa DMA	Internal		111°C [25]	166.7°C [4]
HDT @ 0.455 MPa VICAT	ASTM D648	[20]	[19]	[21]
HDT @ 1.82 MPa VICAT	ASTM D648		[23]	[22]
Coefficient of Thermal Expansion (25-200°C)	ASTM E831		114 µm/m-°C [17]	106 µm/m-°C [18]
Other Properties				
Durometer (Shore D, 0 Sec)	ASTM D2240		94D [8]	94.5D [7]
IZOD Impact Strength	ASTM D256		14.6 J/m [13]	14.5 J/m [14]
Water Absorption (24 Hr)	ASTM D570		0.25% [16]	
Solid Density	ASTM D792	[24]	[24]	
Shrinkage by Density	ASTM D792	[24]	[24]	
Liquid Properties				
Viscosity @ 25°C (77°F)	ASTM D7867	2105 ± 200 cP [11]		
Liquid Density	ASTM D1475	1.15 g/mL [15]		

"All specimen are printed unless otherwise noted. All specimen were conditioned in ambient lab conditions at 19-23C / 40-60% RH for at least 24 hours." ASTM Methods: D638 Type IV, 5mm/min, D790-B, 2mm/min, D256 Notched IZOD (Machine Notched), 6 mm x 12 mm, D648, D2240, Type "D" (0, 3 seconds), D570 0.125" x 2" Disc 24hr@ 25°C, D7867@ 25°C (77°F), D1475,

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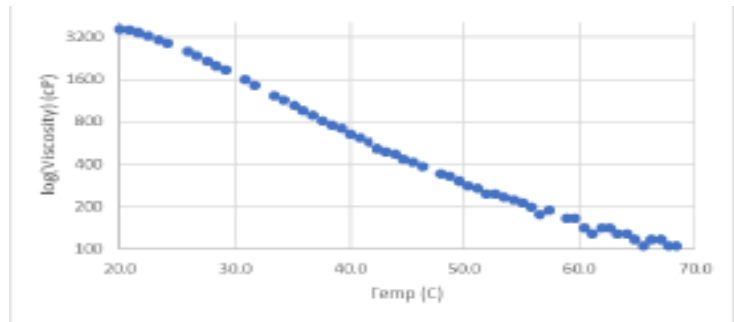
Machine Settings

E-IND147 is formulated to print optimally on any DLP machine. It is recommended to print with 405 nm wavelength projectors with irradiance between 4-8 mW/cm². Layer time is given below at 5mW/cm²:

Layer Thickness:	25um	50um	100um
Base Cure Time:	25s	25s	25s
Model Layer Cure Time:	3s	4s	5s

Ec (mJ/cm ²):	
Dp (mm):	

Viscosity Profile



Post Processing

E-IND147 requires post processing to achieve specified properties. Prior to post curing, support structures should be removed from the printed part, and the part should be washed in a friendly cleaner. LOCTITE recommends either IPA, **LOCTITE® Cleaner C** with a 2 to 5 minute wash in an ultrasonic bath. Wait a minimum of 60minutes before starting post cure. Exact times and methods can be found by contacting us at www.loctiteAM.com

Post Curing

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