

CarbonResin RPU 70

Polyurethane

Carbon3D, Inc.

Message:

RPU 70 is a tough, heat resistant material that is a good choice for parts requiring strength, toughness, and moderate heat resistance.

General Information			
Features	Good Heat Resistance		
	Good strength		
	Good toughness		
Forms	Liquid		
Processing Method	3D Printing, Continuous Liquid Interface Production (CLIP)		
Physical	Nominal Value	Unit	
Density ¹	1.01	g/cm ³	
Viscosity (25°C)	2.10 - 2.30	Pa · s	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1700 - 2100	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	43.0 - 47.0	MPa	ASTM D638
Fracture	43.0 - 47.0	MPa	ASTM D638
Tensile Elongation (Break)	80 - 120	%	ASTM D638
Flexural Modulus	1500 - 2100	MPa	ASTM D790
Flexural Strength	53.0 - 71.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ²	21 - 23	J/m	ASTM D256
Unnotched Izod Impact	500 - 560	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	70.0	°C	ASTM D648
1.8 MPa, not annealed	55.0	°C	ASTM D648
Glass Transition Temperature			DMA
-- ³	80.0	°C	DMA
-- ⁴	119	°C	DMA
CLTE - Flow	1.6E-4	cm/cm/°C	ASTM E228
NOTE			
1.	Liquid		
2.	Machined Notch		
3.	E'		
4.	tan(d)		

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Recommended distributors for this material

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