Crestaform® | HDT 120

Technical Data Sheet

Introduction

Crestaform® HDT 120 is a high-performance engineering resin combining exceptional thermal resistance with outstanding mechanical properties, including flexural strength exceeding 150 MPa and heat deflection temperatures above 120°C (Method B, 1.8 MPa). It achieves a heat deflection temperature of **118 °C at 1.8 MPa** after a 2-hour UV post-cure at 80 °C in a standard heated cure station — ***no convection oven required*** — rising to 170 °C with an optional 3-hour step at 160 °C in a convection oven. A single formulation delivers three performance levels, allowing customers to trade post-cure time against thermal and mechanical performance. Unlike filled high-temperature resins, it runs on any open 385/405 nm LCD or DLP printer without preheating, vat agitation or settling problems.

General Properties	Test	Typical Values			
Viscosity @ 25^{0}C	Cone & Plate, 0-10P	4.5 Ps			
Liquid Density @ 25^{0}C	Anton Paar	1.11 g/cm^3			
Tensile Properties*	**Test**	**Typical Values**			
		Green	**1**	**2**	**3**
Tensile Modulus	ASTM D638	2.4 GPa	5.0 GPa	**5.3 GPa**	5.2 GPa
Tensile Strength	ASTM D638	44 MPa	90 MPa	**83 MPa**	81 MPa
Elongation at Break	ASTM D638	13.10%	2.70%	**2.10%**	2.10%
Flexural Properties*	**Test**	**Green**	**1**	**2**	**3**
Flexural Modulus	ASTM D790	1.8 GPa	4.7 GPa	**4.8 GPa**	4.6 GPa
Flexural Strength	ASTM D790	61 MPa	152 MPa	**154 MPa**	165 MPa
Other Properties	**Test**	**Green**	**1**	**2**	**3**
Heat Deflection Temperature*	ASTM D648, Method A (1.8 MPa)	50 °C	86 °C	**118 °C**	170 °C
	ASTM D648, Method B (0.45 MPa)	64 °C	135 °C	**165 °C**	>200 °C
Shore D Hardness**	ISO 868	82 D	87 D	**89 D**	89 D

* Testing specimens printed edgewise at 0° orientation

** Testing specimens printed flatwise

Post-cure conditions: [1] 1h UV at 60 °C in Formcure; [2] 2h UV at 80 °C in Formcure; [3] 2h UV at 80 °C in Formcure followed by 3h at 160 °C in convection oven

Printing Performance

Quality of the printed parts are impacted by combination of 3D printer and material used. More information about printing parameters as well as Usage, Storage, Packaging and Health and Safety can be found in the relevant product guideline.

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