

Clear Resin V5

An optimally-balanced Clear Resin for transparent applications

Clear Resin V5 is an exceptionally clear and color-neutral General Purpose Resin, offering an optimal balance of fast print speed, high dimensional accuracy, and presentation-ready appearance.

Clear Resin V5 creates highly transparent and colorless parts that can be polished to near optical transparency. Create parts that are stiff and strong with a smooth surface finish that rivals acrylic.

Clear Resin V5 is a new material formulation that leverages the Form 4 ecosystem to print three times faster than the previous version.

Transparent enclosures, optical components, and lighting prototypes

Parts showcasing internal features

Molds, masters, and other rapid tooling

Fluidic devices



V5 **FLGPCL05**

* May not be available in all regions

**ORDER A FREE
SAMPLE PART →**



MATERIAL PROPERTIES DATA

Clear Resin V5

	METRIC ¹			IMPERIAL ¹			METHOD
	Green	Post-Cured 5 min (Ambient) ²	Post-Cured 15 min at 60 °C ³	Green	Post-Cured 5 min (Ambient) ²	Post-Cured 15 min at 140 °F ³	
Tensile Properties							
Ultimate Tensile Strength	46 MPa	51 MPa	60 MPa	6672 psi	7340 psi	8702 psi	ASTM D638-14
Tensile Modulus	2200 MPa	2575 MPa	2750 MPa	319 ksi	373 ksi	399 ksi	ASTM D638-14
Elongation at Break	13%	10%	8%	13%	10%	8%	ASTM D638-14
Flexural Properties							
Flexural Strength	83 MPa	92 MPa	105 MPa	12038 psi	13343 psi	15229 psi	ASTM D790-15
Flexural Modulus	2100 MPa	2450 MPa	2700 MPa	305 ksi	355 ksi	392 ksi	ASTM D790-15
Impact Properties							
Notched Izod	32 J/m	29 J/m	29 J/m	0.598 ft-lbs/in	0.542 ft-lbs/in	0.542 ft-lbs/in	ASTM D4812-11
Thermal Properties							
Heat Deflection Temp. @ 1.8 MPa	47 °C	49 °C	59 °C	117 °F	120 °F	138 °F	ASTM D648-16
Heat Deflection Temp. @ 0.45 MPa	52 °C	56 °C	74 °C	126 °F	133 °F	165 °F	ASTM D648-16
			5 min (Ambient)	15 min at 60 °C			
Polished Optical Properties							
Transmission @ 2mm			85%			85%	ASTM D1003-21
a* @ 2mm			-4.02			-4.31	ASTM E1348-15
b* @ 2mm			7.52			5.58	ASTM E1348-15
Transmission @ 10mm			59%			59%	ASTM D1003-21
a* @ 10mm			-4.25			-3.98	ASTM E1348-15
b* @ 10mm			5.98			5.94	ASTM E1348-15

Transmission refers to the amount of visible light that passes through the part

a* and b* are more commonly associated with the CIELAB color space, where they denote axes for color measurement:

a* axis: Ranges from green to red, with negative values indicating green and positive values indicating red.

b* axis: Ranges from blue to yellow, with negative values indicating blue and positive values indicating yellow.

SOLVENT COMPATIBILITY

Percent weight gain over 24 hours for a printed and post-cured 1 x 1 x 1 cm cube immersed in respective solvent:

Solvent	24 hr weight gain, %	Solvent	24 hr weight gain, %
Acetic Acid 5%	0.9	Mineral oil (Heavy)	0.2
Acetone	5.1	Mineral oil (Light)	0.2
Bleach ~5% NaOCl	0.7	Salt Water (3.5% NaCl)	0.8
Butyl Acetate	0.3	Skydrol 5	0.7
Diesel Fuel	0.1	Sodium Hydroxide solution (0.025% PH 10)	0.8
Diethyl glycol Monomethyl Ether	1.1	Strong Acid (HCl conc)	0.5
Hydraulic Oil	0.1	Tripropylene glycol monomethyl ether	0.5
Hydrogen peroxide (3%)	0.9	Water	0.9
Isooctane (aka gasoline)	< 0.1	Xylene	< 0.1
Isopropyl Alcohol	0.3		

¹ Material properties may vary based on part geometry, print orientation, print settings, temperature, and disinfection or sterilization methods used.

² Data was obtained from parts printed on a Form 4 printer with 100 µm Clear Resin V5 settings, washed in a Form Wash for 5 minutes in ≥99% Isopropyl Alcohol, and post-cured at room temperature for 5 minutes in a Form Cure.

³ Data was obtained from parts printed on a Form 4 printer with 100 µm Clear Resin V5 settings, washed in a Form Wash for 5 minutes in ≥99% Isopropyl Alcohol, and post-cured at 60°C for 15 minutes in a Form Cure.