



Résine : TOUGH

Caracteristiques :

Haute Résistance

Cette résine a été conçue pour simuler le plastique ABS et présente une résistance à la traction et un module d'élasticité comparables. Cette résine solide, résistante à la rupture et pouvant supporter des déformations ou des contraintes importantes, convient parfaitement au prototypage.

Applications:

- Assemblages à emboîtement élastique
- Autres types d'assemblage
- Prototypes résistants



	METRIC ¹		IMPERIAL ¹		METHOD
	Green ²	Post-Cured ³	Green ²	Post-Cured ³	
Mechanical Properties					
Ultimate Tensile Strength	34.7 MPa	55.7 MPa	5040 psi	8080 psi	ASTM D 638-14
Young's Modulus	1.7 GPa	2.7 GPa	239 ksi	387 ksi	ASTM D 638-14
Elongation at Break	42 %	24 %	42 %	24 %	ASTM D 638-14
Flexural Strength at 5% Strain	20.8 MPa	60.6 MPa	3020 psi	8790 psi	ASTM D 790-15
Flexural Modulus	0.6 GPa	1.6 GPa	90.3 ksi	241 ksi	ASTM D 790-15
Notched IZOD	32.6 J/m	38 J/m	0.61 ft-lbf/in	0.71 ft-lbf/in	ASTM D 256-10
Thermal Properties					
Heat Deflection Temp. @ 1.8 MPa	32.8 °C	45.9 °C	91.1 °F	114.6 °F	ASTM D 648-16
Heat Deflection Temp. @ 0.45 MPa	40.4 °C	48.5 °C	104.7 °F	119.3 °F	ASTM D 648-16
Thermal Expansion (23 – 50 °C)	159.7 µm/m/°C	119.4 µm/m/°C	88.7 µin/in/°F	66.3 µin/in/°F	ASTM E 831-13

NOTES:

¹Material properties can vary with part geometry, print orientation, print settings, and temperature.

²Data was obtained from green parts, printed at 100 µm, Tough settings, without additional treatments.

³Data was obtained from parts printed at 100 µm, Tough settings and post-cured with 2.5 mW/cm² of 405 nm LED light for 120 minutes at 60°C.

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:

Mechanical Properties	24 HR WEIGHT GAIN (%)
Acetic Acid, 5 %	2.8
Acetone	sample cracked
Isopropyl Alcohol	2.1
Bleach, ~5 % NaOCl	1.7
Butyl Acetate	1.6
Diesel	< 1
Diethyl glycol monomethyl ether	6.6
Hydraulic Oil	< 1
Skydrol 5	1.2
Hydrogen Peroxide (3 %)	2.1
Isooctane	< 1
Mineral Oil, light	< 1
Mineral Oil, heavy	< 1
Salt Water (3.5 % NaCl)	1.5
Sodium hydroxide (0.025 %, pH = 10)	1.5
Water	1.6
Xylene	< 1
Strong Acid (HCl Conc)	distorted