

TM 79

High Toughness Resin

TM 79 is the material of choice for the application of high toughness and durability parts. TM 79 performance is analogous to PA 12, with excellent low shrinkage and high impact strength. It is an ideal material for rapid prototyping and small batch test parts processing such as wind tunnel testing, electrical enclosures, tooling fixtures and automotive interior and exterior trim. Based on LEAP™ nano-release technology, the components are formed quickly, post-processing is easy, and it has excellent dimensional accuracy and detail resolution.

TM 79 passed the "EU REACH Regulation No. 1907/2006 211 Substances of Very High Concern (SVHC) for Screening Test", "ISO 10993-10:2010 Biological evaluation of medical devices-Part 10:Tests for irritation and skin sensitization"and"ISO 10993-5:2009 Biological evaluation of medical devices Part 5: Tests for In Vitro Cytotoxicity "



Tough



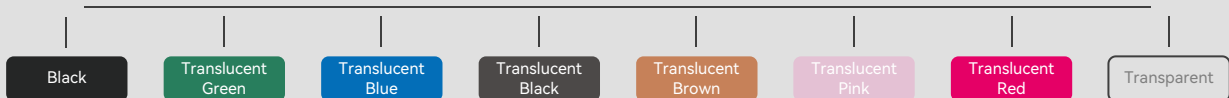
Accurate



Fast



Customized Colors Available



US:

940 Old County Rd, Belmont, CA, 94002, USA

MAT #TM792101-01 Rev1.4

TM 79 Solvent Data Sheet:

Tensile Properties, ASTM D638		Metric	U.S.
Tensile Modulus		1820 MPa	264.0 ksi
Ultimate Tensile Strength		49.92 MPa	7.24 ksi
Elongation at Break		18 %	18 %
Tensile Strength at Yield		52.49 MPa	7.61ksi
Elongation at Yield		5.0 %	5.0 %
Impact Properties		Metric	U.S.
Notched Izod (Machined), 23°C, ASTM D256		89.7 J/m	1.68 ft-lb/in
Notched Izod (Machined), -30°C, ASTM D256		54.2 J/m	1.01 ft-lb/in
Notched Izod (Machined), 23°C, ISO 180/A		6.02 KJ/m ²	2.87 ft-lb/in ²
Notched Izod (Machined), -30°C, ISO 180/A		4.95 KJ/m ²	2.36 ft-lb/in ²
Flexural Properties, ASTM D790		Metric	U.S.
Flexural Strength		60.42 MPa	8.76 ksi
Flexural Modulus		1488 MPa	209.7 ksi
Thermal Properties, ASTM D648		Metric	U.S.
Heat Deflection Temperature @ 0.455 MPa/66 psi,ASTM D648		76.2 °C	169.2 °F
Heat Deflection Temperature @ 1.82 MPa/264 psi, ASTM D648		60.0 °C	140.0 °F
General Properties		Metric	
Hardness, Shore D, ASTM D2240		80D	
Density (cured resin), ASTM D792		1.20 g/cm ³	
Density (liquid resin), ASTM D4052		1.15 g/cm ³	
Viscosity, 40°C, ASTM D2196		1000 cps	
Water Absorption, 24 hours, 23°C, ASTM D570		0.71 %	
Water Absorption, Long Term (14 Days), ASTM D570		2.78 %	

These data are typical values and were determined through testing on printers which are validated for use with Luxcreo's products. Mechanical properties will vary based on machine, part orientation, machine type, machine power, post curing of the printed parts, and cleaning. See product guide for post-processing procedure and best practices. Improper use or failure to adhere to the product guide may result in variations of color and mechanical properties. Luxcreo reserves the right to change material characteristics, and formulation without prior notification.

TM 79 Solvent Resistance Data Sheet:

Household Chemicals	7 days, 23°C	Recovered by drying for 2 hr at 50°C
Bleach (NaClO 5%)	▲	●
Sanitizer (NH ₄ Cl 40%)	●	●
Distilled Water	■	■
Laundry Detergent (Tide)	■	▲
Ethanol (95%)	■	■
Sunscreen (Banana Boat SPF50)	■	▲
Windex Powerized Formula	■	▲
Industrial Fluids		
Engine Oil (Castrol 5W-30)	▲	▲
Brake Fluid (Castrol DOT-4)	▲	▲
Transmission Fluid (Mcdonch Synthetic ATF600)	▲	●
Engine Coolant (CALTEX Havoline XLC, 50% / 50% premixed)	●	●
Diesel (#0)	●	●
Gasoline (#92)	●	●
Skydrol 500B-4	●	●
Strong Acid/Base		
Sulfuric Acid (H ₂ SO ₄ 30%)	▲	●
Sodium Hydroxide (NaOH 10%)	■	▲

●	Excellent	▲	Medium	■	Bad
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