

# TM<sup>+</sup>83

## Tough Material

TM<sup>+</sup>83 is LuxCreo's latest tough material. Characterized by strength, toughness and impact-resistance, it is the ideal choice for producing functional parts that must withstand high stresses and impact. Use for aviation, automobile, and other industrial applications.



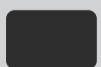
**Strong**



**Tough**



**Impact Resistant**



Black

**US :** 940 Old County Rd, Belmont, CA, 94002, USA

**CN :** Room 1017, Building S5, Jinyu Smart Factory, Building Material City Mid Road No. 28, Haidian District, Beijing

## Mechanical Properties :

<b>Tensile Properties ASTM D638</b>	<b>Metric</b>	<b>U.S.</b>
Tensile Modulus	1313 MPa	190.4 ksi
Ultimate Tensile Strength	36.1 MPa	5.24 ksi
Elongation at Break	95 %	95 %
Tensile Strength at Yield	32.09 MPa	4.65 ksi
Elongation at Yield	4.58 %	4.58 %
<b>Impact Properties ASTM D256</b>	<b>Metric</b>	<b>U.S.</b>
Notched Izod (Machined), 23 °C	77.9 J/m	1.45 ft-lbf/in
Notched Izod (Machined), -30 °C	58.9 J/m	1.10 ft-lbf/in
<b>Flexural Properties ASTM D790</b>	<b>Metric</b>	<b>U.S.</b>
Flexural Strength	44.5 MPa	6.77 ksi
Flexural Modulus	1237 MPa	184.55 ksi
<b>Thermal Properties ASTM D648</b>	<b>Metric</b>	<b>U.S.</b>
Heat Deflection Temperature @ 0.455MPa/66psi	70 °C	158 °F
<b>General Properties</b>	<b>Metric</b>	
Shore Hardness, ASTM D2240	79D	
Density, ASTM D792	1.10 g/cm <sup>3</sup>	
Water Absorption, 23 °C, 24 hours, ASTM D570	2.02%	
Water Absorption, 23 °C, long term, ASTM D570	5.10%	

**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. This product is suitable for the manufacturing of orthodontic and dental models. Luxcreo reserves the right to change material characteristics, and formulation without prior notification.