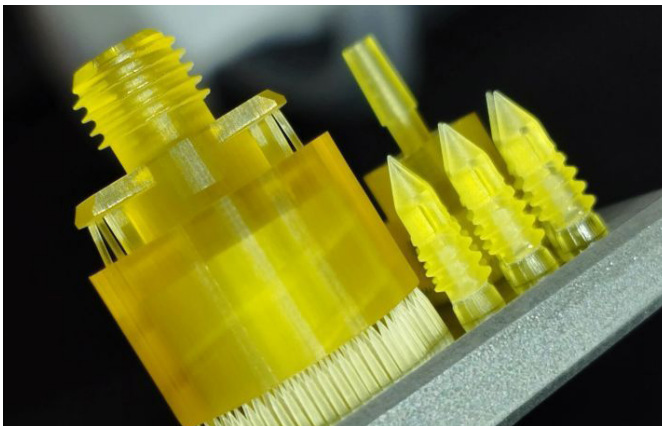


BIO

(Matrix BIO)

BIO is a biocompatible resin suitable for non-implantable medical applications. BIO can undergo sterilisation and has passed numerous ISO 10993 biocompatibility tests for skin irritation and sensitisation, toxicity, cytotoxicity, pyrogenicity, and in vitro hemolysis.



ISO Standard	Test Description
ISO 10993-10: 2010; ISO 10993-12: 2012; ISO 10993-2: 2006	Skin Irritation Test
ISO 10993-10: 2010; ISO 10993-12: 2012; ISO 10993-12: 2006	Skin Sensitisation Test
ISO 10993-4: 2017	In Vitro Hemolytic Test
ISO 10993-11: 2017; ISO 10993-12: 2012; ISO 10993-2: 2006	Pyrogen Test
ISO 10993-5: 2009; ISO 10993-12: 2012	In Vitro Cytotoxicity Test
ISO 10993-11: 2017; ISO 10993-12: 2012; ISO 10993-2: 2006	Acute Systemic Toxicity Test

		Cured parts	Standard
Tensile Properties	Tensile Strength	56.0 MPa	ASTM D638
	Elastic Modulus	1614 MPa	ASTM D638
	Elongation at Break	6.2%	ASTM D638
Flexural Properties	Flexural Strength	106.6 MPa	ASTM D790
	Flexural Modulus	3.5 GPa	ASTM D790
Thermal Properties	CTE @ 60C	170.3 $\mu\text{m}/\text{m}/^\circ\text{C}$	
	HDT @ 0.45 MPa	85.7 $^\circ\text{C}$	ASTM D648 - 07
General properties	Contact Angle	50-70 $^\circ$	ASTM D7334
	Water Absorption (24h)	0.69%	ASTM D570
	Dialectic Constant (10 GHz)	2.75	-
	DF	0.0458	
	Hardness	84 Shore D	ASTM D785
	Viscosity	300 cP	-
	Standard Colour	Yellow trans	-
Cell Culture Survival Rate In Vitro	75%	-	

¹ Final properties are dependent on print conditions, post-processing operations, and part geometry.

² Test samples were UV cured and heat cured.

Warranty/Disclaimer: The performance characteristics of these products may vary according to product application, operating conditions, material combined with, or with end use. Prototype Projects makes no warranties of any type, express or implied, including, but not limited to, the warranties of merchantability or fitness for a particular use.