

Rugged Resin

Nylon 6

Photopolymer Resin for B9 Core Series

Material Properties

Prepared: 01.10.2019

B9Creations' Rugged - Nylon 6 resin features low modulus, high elongation, and high impact strength, and is ideal for snap-fit and wear-resistant parts.

Tough enough to stand up to the rigors of long-term, real-world use replacing traditionally injection molded components. Well-suited for functional testing and low- to mid-volume production runs.

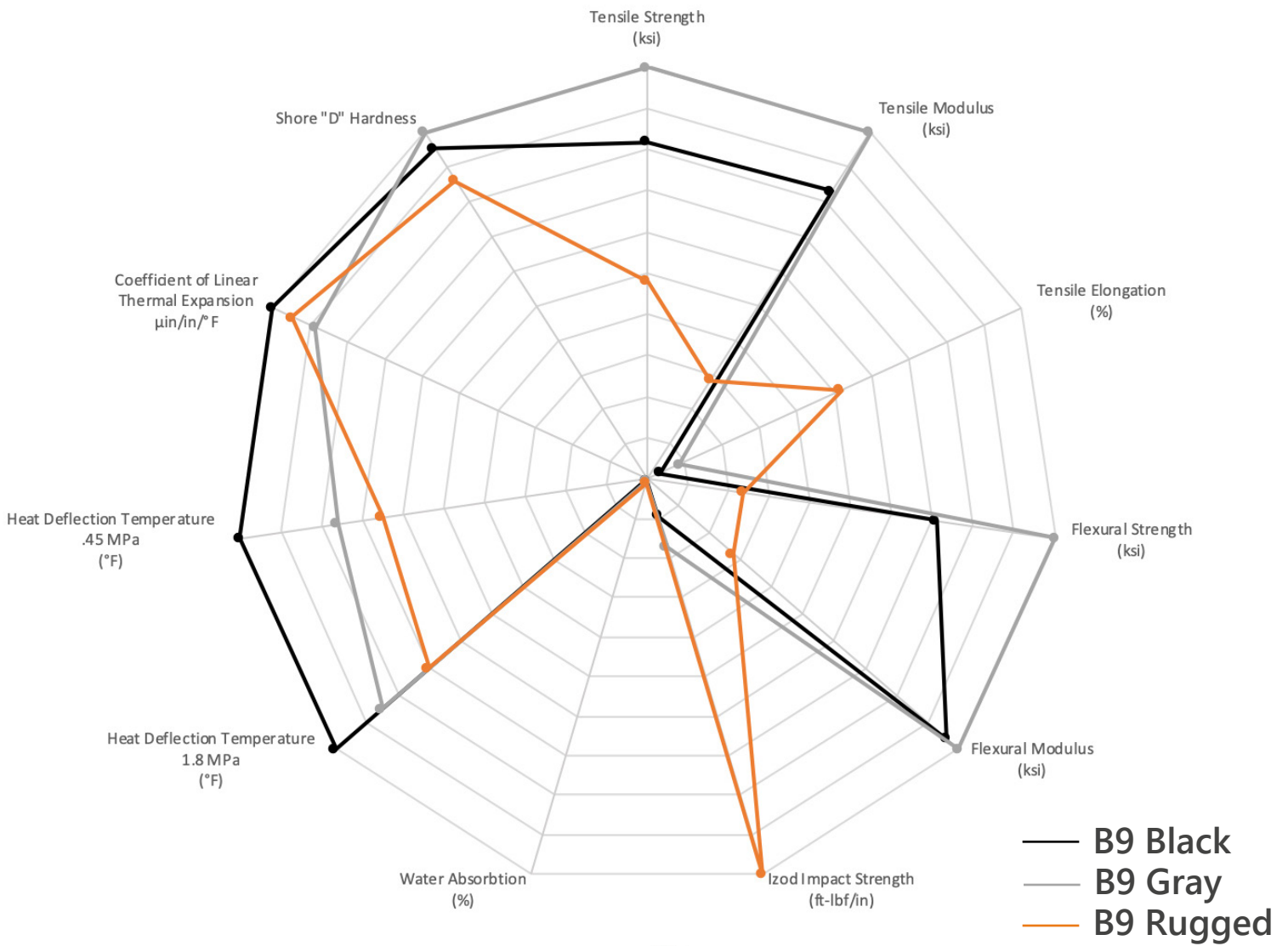
- Durability
- Impact and abrasion resistance
- Flexibility
- High strength-to-weight ratio
- Excellent surface resolution and feature detail
- Low moisture absorption

	METRIC	IMPERIAL	METHOD
TENSILE PROPERTIES			
Tensile Strength	21.41 MPa	3.11 ksi	ASTM D638-14
Tensile Modulus	600 MPa	87.02 ksi	ASTM D638-14
Elongation	51.8%	51.8%	ASTM D638-14
FLEXURAL PROPERTIES			
Flexural Strength	15.0 MPa	2.18 ksi	ISO 178 (2015)
Flexural Modulus	522 MPa	75.71 ksi	ISO 178 (2015)
IMPACT PROPERTIES			
IZOD Impact Strength	121 J/m	2.27 ft-lbf/in	ASTM D256-18
WATER ABSORPTION			
	0.88%	0.88%	
TEMPERATURE PROPERTIES			
Heat Deflection Temp @ 1.80 MPa	29 °C	84.2 °F	ISO 75-1, ISO 75-2 (2013)
Heat Deflection Temp @ 0.45 MPa	36 °C	96.8 °F	ISO 75-1, ISO 75-2 (2013)
Thermal Expansion Flow	198 µm/m-°C	110 µin/in-°F	ASTM E831-14
Thermal Expansion Cross-Flow	169 µm/m-°C	93.89 µin/in-°F	ASTM E831-14
SHORE "D" HARDNESS			
	75	75	ASTM D2240-15
VISCOSITY			
	4826 CPS @ 26 °C	4826 CPS @ 79 °F	
SPECIFIC GRAVITY			
	1.06	1.06	
DENSITY			
	1.08-1.14 g/mL	9-9.5 Lbs/Gallon	

*All results were from models cured for 5 minutes.

B9Creations Materials

Rugged vs. B9 Black vs. B9 Gray



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