

SLS MATERIAL SPECIFICATIONS

PA 640-GSL

Highlights

- Light weight Nylon 12 material with carbon fiber
- High strength-to-weight ratio

Applications

- Aerospace
- Unmanned Aerial Vehicles (UAV)

TYPICAL PHYSICAL PROPERTIES

Property	Test Method	English	Metric
Color/Appearance	Visual	Dark Grey	Dark Grey
Density	ASTM D1895	0.0303 lb/in ³	0.84 g/cm ³
Elongation at Break - XY Axis	ASTM D638	2.63%	2.63%
Elongation at Break - Z Axis	ASTM D638	2.77%	2.77%
Flexural Modulus - XY Axis	ASTM D790	731,039 psi	5,040 MPa
Flexural Modulus - Z Axis	ASTM D790	625,535 psi	4,313 MPa
Flexural Strength - XY Axis	ASTM D790	20,401 psi	141 MPa
Flexural Strength - Z Axis	ASTM D790	17,567 psi	121 MPa
Heat Deflection Temperature @ 264 psi - XY Axis	ASTM D648	338°F	170°C
Heat Deflection Temperature @ 264 psi - Z Axis	ASTM D648	303°F	151°C
Heat Deflection Temperature @ 66 psi - XY Axis	ASTM D648	356°F	180°C
Heat Deflection Temperature @ 66 psi - Z Axis	ASTM D648	352°F	178°C
Tensile Modulus - XY Axis	ASTM D638	554,000 psi	3,816 MPa
Tensile Modulus - Z Axis	ASTM D638	282,089 psi	1,945 MPa
Tensile Strength - XY Axis	ASTM D638	7,170 psi	49 MPa
Tensile Strength - Z Axis	ASTM D638	4,835 psi	33 MPa
Volume Resistance	ASTM D257	7.6E+05 ohms-cm	—
Surface Resistance	ASTM D257	4.0E+04 ohms	—
Voltage Field	—	<50 volts	—

Certification for traceability.

The material properties provided herein are for reference purposes only. Actual values may vary significantly as they are dramatically affected by part geometry and process parameters. Material specifications are subject to change with out notice.

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