

MATERIAL SPECIFICATIONS

PA 550-ACF

HIGHLIGHTS

- Aluminum and carbon fiber filled nylon 12
- Parts exhibit excellent stiffness and mechanical characteristics
- Higher temperature tolerance compared to standard nylon 12's
- Easy to process on machines with a Multizone heating system from Integra

APPLICATIONS

- Automotive engine components
- Mould and tooling applications
- High performance motorsports and outdoor recreation
- Ideal for rugged applications requiring stiffness at sustained elevated temperatures

TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	U.S. STANDARD	METRIC
Colour/Appearance	Visual	Dark Grey	Dark Grey
Bulk Density	ASTM D1895	0.358 oz/in ³	0.62 g/cm ³
Average Particle Size (D50)	Laser Diffraction	0.002 inches	50 microns
Particle Size Range (D10-D90)	Laser Diffraction	0.001 - 0.004 inches	35 - 100 microns
Sintered Part Density	ASTM D792	0.780 oz/in ³	1.35 g/cm ³
Heat Deflection Temperature	ASTM D648	352°F @ 66 psi	178°C @ 0.45 MPa
Heat Deflection Temperature	ASTM D648	305°F @ 264 psi	152°C @ 1.82 MPa
Ultimate Tensile Strength (XY)	ASTM D638	8,412 psi	58 MPa
Tensile Modulus (XY)	ASTM D638	727,944 psi	5,019 MPa
Flexural Modulus (XY)	ASTM D790	730,990 psi	5,040 MPa
Elongation at Break (XY)	ASTM D638	4%	4%
Izod Impact Strength (Un-Notched)	ASTM D256	2.3 ft-lb/in	121 J/m
Izod Impact Strength (Notched)	ASTM D256	1.1 ft-lb/in	56 J/m

For reference use only. Actual properties may vary significantly from those listed above based on processing parameters, operating conditions and end use applications. The above properties were based on virgin ALM PA 550-ACF using normal processing parameters on a 2500+ platform as outlined in the ALM Material Processing Guide. Advanced Laser Materials, LLC makes no warranties of materials for any application, nor does it make a warranty of any type, expressed or implied, but not limited to, the warranties of merchantability for a particular purpose.



RP Support Ltd.
14 Bridgegate Business Park
Gatehouse Way
Aylesbury
Buckinghamshire
HP19 8XN
United Kingdom

☎ +44 (0)1296 425665

☎ +44 (0)1296 425665

✉ support@rpsupport.co.uk



ALM PA 550-ACF: 04.02.2013