

ALUMINUM FILLED

**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
- Mold and tooling applications
- High performance motorsports and outdoor recreation
- Idea for rugged applications requiring stiffness at sustained elevated temperatures

**TYPICAL PHYSICAL PROPERTIES**

PROPERTY	TEST METHOD	ENGLISH	METRIC
Color/Appearance	Visual	Dark Grey	Dark Grey
Bulk Density	ASTM D792	0.358 oz/in <sup>3</sup>	0.62 g/cm <sup>3</sup>
Average Particle Size (D50)	ASTM D638	0.002 inches	50 microns
Particle Size Range (D10-D90)	ASTM D790	0.001 - 0.004 inches	35 - 100 microns
Sintered Part Density	ASTM D790	0.780 oz/in <sup>3</sup>	1.35 g/cm <sup>3</sup>
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 D256	8,412 psi	58 MPa
Tensile Modulus (XY)	ASTM D638	727,944 psi	5,019 MPa
Flexural Modulus (XY)	ASTM D638	730,990 psi	5,040 MPa
Elongation at Break (XY)	ASTM E831	4%	4%
Izod Impact Strength - Unnotched	ASTM E831	2.3 ft-lb/in	121 J/m
Izod Impact Strength - Notched	-	1.1 ft-lb/in	56 J/m

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 without notice.



AN EOS COMPANY

254.773.3080

[www.alm-llc.com](http://www.alm-llc.com)

[info@alm-llc.com](mailto:info@alm-llc.com)

@ALM\_Global

[www.linkedin.com/company/advanced-laser-materials](https://www.linkedin.com/company/advanced-laser-materials)

3115 Lucius McCelvey, Temple, TX 76504



## About RPS

RPS has been in operation over ten years and our engineers collectively have decades of experience working with stereolithography and laser sintering equipment. With proven experience in 3D printing, engineering, electronics, computer-aided engineering and more, we understand the technology and can offer advice on how it can suit your specific application.

We manufacture the **NEO800** stereolithography system, designed, developed and built by RPS engineers. We are also an HP Channel Partner of HP's Multi-Jet Fusion technology and offer a range of materials and software through our partnership with market-leading suppliers ALM, DSM Somos® and Materialise.

    +44 (0) 1296 425665 | [support@rps.ltd](mailto:support@rps.ltd) | [www.rps.ltd](http://www.rps.ltd)

14 Bridgegate Business Park | Gatehouse Way | Aylesbury | Buckinghamshire | HP19 8XN | UK