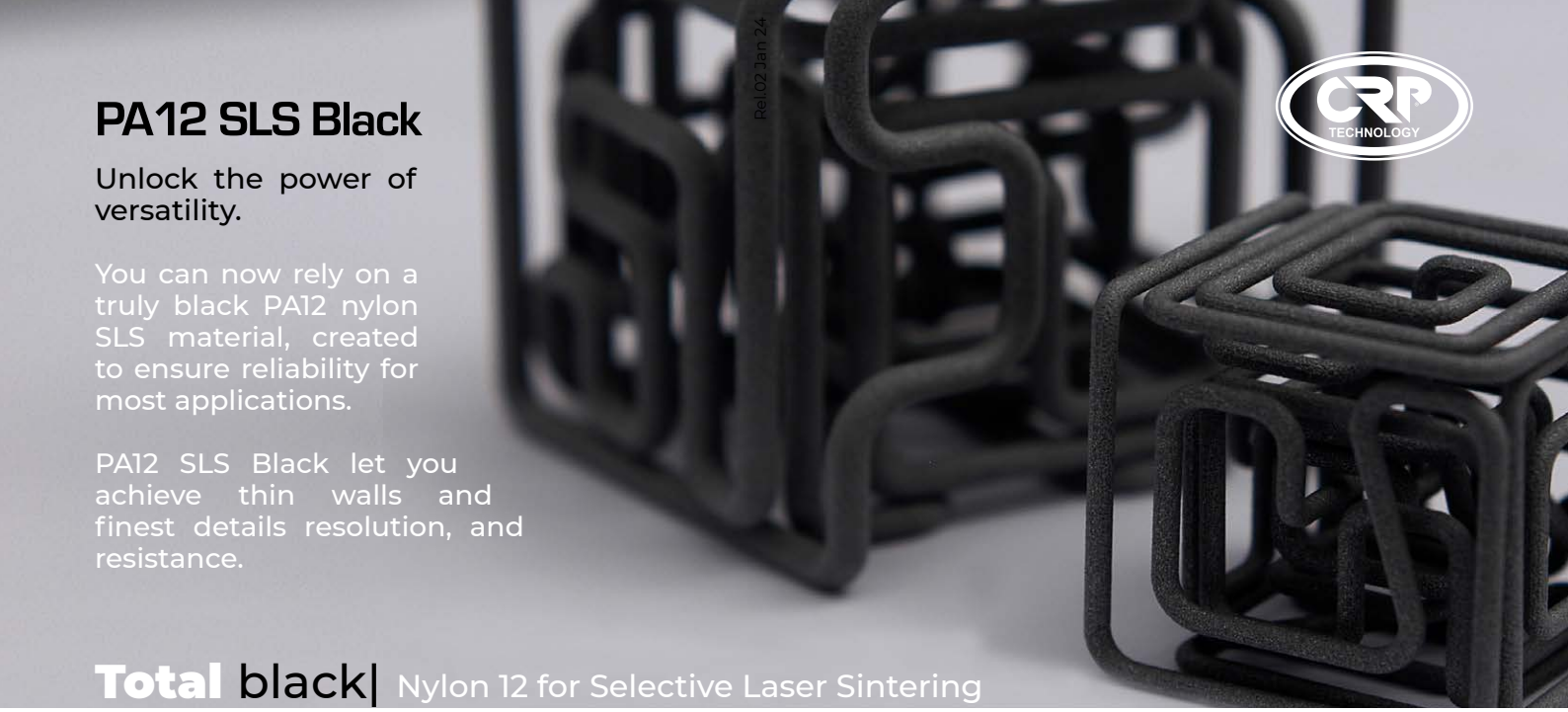

Rel.02 Jan 24

PA12 SLS Black

Unlock the power of versatility.

You can now rely on a truly black PA12 nylon SLS material, created to ensure reliability for most applications.

PA12 SLS Black let you achieve thin walls and finest details resolution, and resistance.

Total black| Nylon 12 for Selective Laser Sintering

Good Mechanical Performances

Performing optimal robustness and stability, PA12 SLS Black is ideal to replace injection molded parts with 3D printed all-in-one components destined to last.

Low Density for Lightweight Strong Parts

Featuring low density it allows for the production of lightweight yet durable parts, making it an ideal choice for applications where weight reduction is crucial.

Resistant to Water, Solvents & Abrasion

Weather and water-proof as well as to the corrosion of organic solvents.
It is compatible with most paints as well as primers.

Applications

Distinguished for its **dark black color, PA12 SLS Black is a versatile cost-effective ally** for a wide range of industrial applications in many sectors: connectors, hinges, housings and enclosures, jigs and fixtures just to cite a few.

By PA12 SLS Black you can achieve complex geometries and thin walls even for small objects, including functional prototypes, small series, and limited editions.

You can rely on CRP experienced 3D printing service to receive your reliable parts internationally in a matter of days!

Not sure if PA12 SLS Black is the proper choice for you project?
Get in touch with our experts for a free consultancy today!

MORE INFORMATION OR EXPRESS QUOTE?

Europe
info@crp-group.com

North America
info@crp-usa.net

UAE & GCC
info@crp-gulf.com

Rel.03_1124

	Test Method	SI Unit	US Unit
General Properties			
Density (20 °C/68 °F)		0,99 g/cc	0.99 g/cc
Colour		BLACK	BLACK
Thermal Properties			
Melting point	ISO 11357	181,70 °C	359.06 °F
HDT, 1.82 MPa	ISO 75 Method A	95,80 °C	204.44 °F
Vicat 10N	ISO 306 Method A50	177,20 °C	350.96 °F
Mechanical Properties			
Tensile Strength - XY axis	UNI EN ISO 527-1	47,84 MPa	6938.61 psi
Tensile Strength - YX axis	UNI EN ISO 527-1	47,92 MPa	6950.21 psi
Tensile Strength - ZX axis	UNI EN ISO 527-1	45,78 MPa	6639.83 psi
Tensile Modulus - XY axis	UNI EN ISO 527-1	1907,80 MPa	276.70 ksi
Tensile Modulus - YX axis	UNI EN ISO 527-1	1918,60 MPa	278.27 ksi
Tensile Modulus - ZX axis	UNI EN ISO 527-1	1868,20 MPa	270.96 ksi
Elongation at Break - XY axis	UNI EN ISO 527-1	12,18 %	12.18 %
Elongation at Break - YX axis	UNI EN ISO 527-1	11,06 %	11.06 %
Elongation at Break - ZX axis	UNI EN ISO 527-1	8,70 %	8.70 %
Flexural Strength	UNI EN ISO 14125	68,84 MPa	9984.40 psi
Flexural Modulus	UNI EN ISO 14125	1628,00 MPa	236.12 ksi
Impact Strength Unnotched (Charpy 23 °C/73.4 °F)	UNI EN ISO 179-1	25,40 kJ/m²	12.1 ft-lb/in²
Impact Strength Unnotched (Charpy -30 °C/-22 °F)	UNI EN ISO 179-1	22,60 kJ/m²	10.8 ft-lb/in²
Impact Strength Notched (Charpy 23 °C/73.4 °F)	UNI EN ISO 179-1	4,30 kJ/m²	2.05 ft-lb/in²
Impact Strength Notched (Charpy -30 °C/-22 °F)	UNI EN ISO 179-1	4,00 kJ/m²	1.90 ft-lb/in²
Impact Strength Unnotched (Izod 23°C)	UNI EN ISO 180	19,90 kJ/m²	9,47 ft-lb/in²
Impact Strength Unnotched (Izod -40°C)	UNI EN ISO 180	18,50 kJ/m²	8.80 ft-lb/in²
Impact Strength Notched (Izod 23°C)	UNI EN ISO 180	4,90 kJ/m²	2.33 ft-lb/in²
Impact Strength Notched (Izod -40°C)	UNI EN ISO 180	4,70 kJ/m²	2.24 ft-lb/in²
Hardness Shore D	UNI EN ISO 868	78	78
Electrical Properties			
Resistivity, Volume	ASTM D257-14	1,5 x 10^14 Ω*cm	1.5 x 10^14 Ω*cm
Resistivity, Surface	ASTM D257-14	9,3 x 10^14 Ω	9.3 x 10^14 Ω
CTI Comparative Tracking Index	IEC 60112 Solution A	600 V	600 V
Surface Finish			
After SLS Process		8,17 Ra µm	8.17 Ra µm
After manual finishing		1,83 Ra µm	1.83 Ra µm
After CNC machining		0,42 Ra µm	0.42 Ra µm
Properties per density unit			
UTS per density unit		48,27 MPa/(g/cc)	7000.97 psi/(g/cc)
Tensile Modulus per density unit		1925,13 MPa/(g/cc)	279.22 ksi/(g/cc)
Flexural Strength per density unit		69,47 MPa/(g/cc)	10075.77 psi/(g/cc)
Flexural Modulus per density unit		1642,79 MPa/(g/cc)	238.27 ksi/(g/cc)

Note: The material properties provided herein are for reference purposes only. Data was generated from the testing of parts produced with PA12 SLS Black material under optimal processing conditions. Actual values may vary significantly as they are affected by part geometry and process parameters. Material specifications are subject to change without notice.

Standard Technical Details for Accuracy versus Tolerance:

For parts up to 1 mm (0.039"), the standard tolerance is ± 0,070 mm (0.003")
For parts up to 3 mm (0.118"), the standard tolerance is ± 0,125 mm (0.005")
For parts up to 6 mm (0.236"), the standard tolerance is ± 0,150 mm (0.006")
For parts over 6 mm (0.236"), refer to UNI EN ISO 286-2 JS14 class (linear tolerances).