

Materials Datasheet for 3D Printing



3D Printers by Technology	HP 5210 (MJF technology)			3D Systems (SLS 6100 technology)			LED (MSLA + 4KSPER™ technology)		
Materials	Nylon PA12 classic	Nylon PA12 performance	Nylon PA12 top mechanical	Nylon PA11 classic	Nylon PA11 performance	Nylon PA11 top mechanical	ABS like classic	ABS like performance	ABS like top mechanical
Natural colour	grey			white			grey		
Available finishes	Black, blue, red, white. In RAL paint and dye colours.			Black, blue, red, white. In RAL paint and dye colours.			-		
Density	1,01 g/cm³			1,02 g/cm³			1,20 g/cm³		
Max workable size	380x284x380 mm (15x11.2x15 in)			335x285x457 mm (13.2x11,2x18 in)			58x120x159 mm (2.28x4.7x6.25 in)		
Applications	<p>Strong thermoplastic for functional prototyping and final parts. Excellent chemical resistance to oils, greases and hydrocarbons. Optimal for post finishing processes.</p> <p>USP Class I-VI and US FDA guidance for Intact Skin Surface Devices, RoHS,11 REACH, PAHs, UL 94, UL 746A , Statement of Composition for Toy Applications.</p>			<p>For functional prototypes and final parts in the automotive and consumer electronics sectors. Excellent impact and fatigue resistance for parts that require hundreds of opening and closing cycles. It can replace injection parts. Resistant to hydrocarbons and oils. UL 94HB.</p>			<p>It offers a great level of detail, extremely smooth surfaces and due to its technical characteristics it replaces ABS in many applications. Excellent for prototypes or functional parts in the automotive and mechanical fields.</p>		
Best tolerance	± 0,30mm under 100mm ±0,3% above 100mm			± 0,30mm under 100mm ±0,3% above 100mm			± 0,20mm under 100mm ±0,25% above 100mm		
Tensile strength [MPa]	22/23	24/25	53/55	38-40	42-45	48-51	44-48	48-52	52-54
Elongation at break [%]	12	15	19	22	24	25	14	16	17
Melting point [°C]	187			180			230		
Electrical conductivity (% IACS)	0	0	0	0	0	0	0	0	0
Rockwell M hardness	Shore D 80			Shore D 76			Shore D 84		
HDT @ 0.45 MPa [°C]	175			193			110		
HDT @ 1.8 MPa [°C]	95			57			78		

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Rockwell M Hardness Duration Chart

