HOW TO CHOOSE RIGID POLYMERS

	PA12	PA11	PA12GB	PP
IDEAL FOR	**Robust and strong** Low cost per part **Good balance** between mechanical properties (Tensile Strength, Modulus and Elongation)	Ductile parts **Higher EaB** & impact than other PA12/PA12GB Raw material from **vegetable castor** oil (reduced environmental impact)	**High stiffness** Dimensional **stability** Higher **HDT**	**Chemical resistance** **Tightness** **Welding** capabilities **Lowest cost** material **100%** reusable
APPLICATIONS	Applications Complex assemblies, housings enclosures and much more	Protheses, insoles, sports goods, snap fits, living hinges	Enclosures and housings, fixtures and tooling	Enclosures and housings, fixtures and tooling
COMPATIBILITY	HP Jet Fusion **4200 & 5200** 3D Printing Solution	HP Jet Fusion **4200 & 5200** 3D Printing Solution	HP Jet Fusion **4200 & 5200** 3D Printing Solution	HP Jet Fusion **5200** 3D Printing Solution

3D Printing & Digital Manufacturing

Mechanical Properties

		HP 3D HR PA12		HP 3D HR PA11		HP 3D HR PA12GB		HP 3D HR PP enabled by BASF		HP 3D HR CB PA12 WHITE / COLOR PARTS	
		XY	Z	XY	Z	XY	Z	XY	Z	XY	Z
MECHANICAL PROPERTIES	TENSILE STRENGTH / MPA	50	50	54	54	31	30	30	30	49/ 36-44	49/34-45
	TENSILE MODULUS/ MPA	1900	1900	1700	1800	2900	3000	1600	1600	1800/ 1300-1600	1900/1400-1700
	ELONGATION AT YELD / %	10	8	25	20	8	4	10	10	11/10-12	9/5-10
	ELONGATION AT BREAK / %	17	9	40	25	9	5	20	18	17/10-17	9/5-12
	IMPACT STRENGTH / KJ/M2	4.2	3.8	7	4.5	3	3	3.5	3	3.2/3.6-3.9	2.7/2.5-3.0
	DENSITY	1.01		1.05		1.3		0.89		1.01	
WORKFLOW		COLD UNPACK FULL BUCKETS		COLD UNPACK FULL BUCKETS		COLD UNPACK FULL BUCKETS		COLD UNPACK FULL BUCKETS		COLD UNPACK FULL BUCKETS	

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