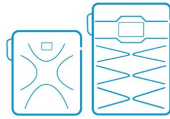
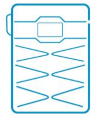
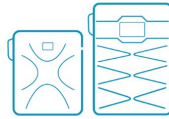
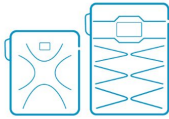


SINTERIT MATERIALS 2018

	PA12		PA11		FLEXA GREY		FLEXA BLACK	
Status	Available		In progress ²		Available		Available	
Material type	Polyamide 12		Polyamide 11		TPU		TPU	
Granulation	20 - 100 [µm] average size 38 [µm]	0,79 - 3,94 [mil] average size 1,5 [mil]	15 - 76 [µm] average size 40 [µm]	0,59 - 3 [mil] average size 1,6 [mil]	20 - 105 [µm]	0,79 - 4,13 [mil]	20 - 105 [µm]	0,79 - 4,13 [mil]
Colour	Navy Grey		Grey		Grey		Black	
Material refreshing ratio ¹	30 [%]		50 [%]		0 [%]		0 [%]	
PARAMETERS								
Elongation at Break XY [%]	13 [%]		17 [%]		210 [%]		55 [%]	
Tensile Strength (Sturdy under stress)	41 [MPa]	5.9 [ksi]	54 [MPa]	7,83 [ksi]	3,6 [MPa]	0.52 [ksi]	4,5 [MPa]	0.65 [ksi]
Softening point (Vicat method type A50 / B50)	A50 / B50 172 / 155 [°C]	A50 / B50 342 / 311 [°F]			A 82,3 [°C]	A 180.1 [°F]	A 82,3 [°C]	A 180.1 [°F]
Melting point	182 ± 2 [°C]	359 [°F]	201 [°C]	393 [°F]				
Heat deflection temperature B (0.45 MPa)	143 [°C]	289 [°F]						
Shore Hardness in scale	D 74 ± 1		D 76 ± 1		A 70 - 90		A 80 - 90	
Roughness for layer thickness 100 µm	6,470 [µm] top surface							
Elastic / Young's modulus E	1020,4 [Mpa]	148 [ksi]			7,8 [MPa]	1.1 [ksi]	47,2 [MPa]	6.8 [ksi]
Abrasion resistance					63 [%]		63 [%]	
Impact resistance			Min. 150 [KJ/m ²]					
APPLICATIONS								
Functional prototypes		•		•		•		•
Final products		•		•		•		•
Detailed objects		•		•		•		•
Complex spatial shapes		•		•		•		•
Parts printed for environments with high mechanical stress (e.g. hinges)				•				
Temperature resistant objects		•		•				
Chemical resistant objects		•		•				
Flexible objects						•		•
Vibration dampers						•		•
Shock absorbers						•		•
Dedicated for SLS 3D printer	 Lisa 1 / Lisa 2		 Lisa 2		 Lisa 1 / Lisa 2		 Lisa 1 / Lisa 2	

¹ Material refreshing ratio - percent of Fresh powder which has to be mixed with Used (unsintered) powder - to be reused to the next print. FLEXA BLACK and GREY has 100 [%] of usability.

² The material PA11 is still in the preparation phase, parameters are subject to change.