TECHNICAL DATA SHEET

FILAFLEX 95A MEDIUM-FLEX

Description

Filaflex is a Thermoplastic Polyether-Polyurethane elastomer with additives that allow high printability in FDM printers. Filaflex® has a remarkable hydrolysis resistance, high resistance to bacteria and low temperature flexibility properties in printed parts.

Physical Property	Value	Unit	Test method according to
Material density	1,08	g/cm3	ISO 1183

Mechanical Property	Value	Unit	Test method according to
Hardness	96	shore A	DIN ISO 7619-1 (3s)
	48	shore D	
Tensile modulus (Young)	60	MPa	ISO 527
Tensile strength	55	MPa	DIN 53504-S2
Elongation at break	500	%	DIN 53504-S2
Stress at 20% elongation	6	%	DIN 53504-S2
Stress at 100% elongation	10	%	DIN 53504-S2
Stress at 300% elongation	18	%	DIN 53504-S2
Tear strength	100	N/mm	ISO 34-1
Abrasion resistant	25	mm3	ISO 4649
Compression set 23ºC/72 hours	30	%	ISO 815
Compression set 70ºC/24 hours	45	%	ISO 815
Tensile strength after storage in water at 80ºC for 42 c	37	Mpa	DIN 53504-S2
Elongation at break after storage in water at 80ºC for	500	%	DIN 53504-S2
Notched impact strengh (Charpy)n at +23ºC	nb	kJ/m2	ISO 179
Notched impact strengh (Charpy)n at -30ºC	nb	kJ/m2	ISO 179
Tensile notched impact strength, +23°C	920	kJ/m2	ISO 8256/1

Thermal Property	Value	Unit	Test method according to
Combustibility O2 index	24	%	ISO 4589-1/-2
Burning behaviour	HB	CLASS	UL 94
Glass Transition Temperature 10°C/min	-30	ºC	ISO 11357-1/-2
VST Vicat Softening Temperature	125	ºC	Método Vicat A: 10 Nw, 120°C/h
Thermal Conductivity	0	W/(mK)	DIN 52612-1
Coeficient Thermal Expansion at 23ºC	190	1/K	ISO 11359-2

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Electrical Property	Value	Unit	Test method according to
WDD Water Vapor Permiability	12,00	g/m2d	ISO 15106-2
Dielectric factor 100Hz	7		IEC 62631-2-1
Dielectric factor 1MHz	5		IEC 62631-2-1
Dissipation factor, 100Hz	390	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	810	E-4	IEC 62631-2-1
Volume resistivity	1E+10	Ohm*m	IEC 62631-3-1
Electric strength	37	kV/mm	IEC 60243-1
CTI Comparative traking index	600		IEC 60112

Printing Properties	Recommended
Printing temperature	215-250°C
Printing speed	20-70 mm/s
Hot-bed temperature	0-40°C (but not required)
Retractions	Direct Drive: 40-70 mm/s at a distance of 3.5 mm | Bowden: 40 mm/s at a distance of 6.5 mm.

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