

BADAFLEX® | TPU 85A 8101 FR HF EX

TPU-FR

Flame-protected, thermoplastic elastomer based on ether-polyurethane for injection moulding and extrusion applications

Properties	Test conditions	Test method	Unit	dry as molded
Physical properties				
Hardness		DIN ISO 7619-1	Shore A	82
		DIN ISO 7619-1	Shore D	35
Density		ISO 1183	g/cm ³	1.1
Overmolding capability				-
Mechanical Properties				
Tensile Strength	Parallel, 200 mm/min Across, 200 mm/min	DIN 53504	MPa	25
		DIN 53504	MPa	-
Elongation at break	Parallel, 200 mm/min Across, 200 mm/min	DIN 53504	%	700
		DIN 53504	%	-
Tear Strength	Parallel Across	DIN ISO 34	N/mm	35
		DIN ISO 34	N/mm	-
Abrasion loss		DIN ISO 4649	mm ³	50
Thermal Properties				
Compression set	23 °C/72 h 70 °C/24 h 100 °C/24 h	DIN ISO 815-1	%	-
		DIN ISO 815-1	%	-
		DIN ISO 815-1	%	-
Thermal conductivity	Test plate 2 mm	DIN 52612-1	W/(m*K)	-
Flammability		UL94	Wall thickness	0.8
		UL94	Rating	V-0
		UL94	Wall thickness	3.0
		UL94	Rating	V-0
Glow wire test GWIT		IEC-60695-2-13	Wall thickness mm	-
		IEC-60695-2-13	Temperature °C	-
		IEC-60695-2-13	Wall thickness mm	-
		IEC-60695-2-13	Temperature °C	-
Glow wire test GWFI		IEC-60695-2-12	Wall thickness mm	-
		IEC-60695-2-12	Temperature °C	-
		IEC-60695-2-12	Wall thickness mm	-
		IEC-60695-2-12	Temperature °C	-
Electrical Properties				
Spec. Volume Resistivity		IEC-62631-3-1	Ohm*cm	-
Spec. Surface Resistivity		IEC-62631-3-2	Ohm	-
Other Data				
Melt volume rate (MVR)	Value Temperature Test load	ISO 1133	cm ³ /10min	-
		ISO 1133	°C	-
		ISO 1133	kg	-
Processing extrusion				
Melt temperature			°C	180 - 195
Guide Value Moisture			%	< 0,02
Drying temperature			°C	70 - 80
Guide Value Drying time			h	2 - 3
Processing injection molding				



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Properties	Test conditions	Test method	Unit	dry as molded
Melt temperature			°C	190 - 205
Mold temperature			°C	20 - 70
Guide Value Moisture			%	< 0,02
Drying temperature			°C	70 - 80
Guide Value Drying time			h	2 - 3

Issue date 12.01.2024

Legend

- = not tested
NB = No break

Based on our current state of knowledge, this data represents reference values and, unless otherwise stated, stands for uncoloured material. Therefore, it does not constitute a warranty of certain properties, more particularly it is no material specification. It is the responsibility of the processors to check the suitability of the material for a particular application as well as compliance with statutory regulations and intellectual property rights. The data stated above may be modified at any time without prior notice. The information does not imply any contractual obligation on our part, any liability is expressly excluded.