



get the difference

BADADUR® | PBT/PC 18 FR - MAT

(PBT+PC)-FR

Medium viscosity PBT/PC injection molding grade with high toughness, flame retarded, excellent mechanical properties and processing

Properties	Test conditions	Test method	Unit	dry as molded
Mechanical Properties				
Tensile Modulus	23°C, 1 mm/Min	ISO 527-1/2	MPa	2500-10ZUGMOD UL
Tensile Strength at yield	23°C, 50 mm/Min	ISO 527-1/2	MPa	60-12-STRECKMO S
Tensile strain at yield	23°C, 50 mm/Min	ISO 527-1/2	%	4-14STRECKDEHN S
Nominal strain at yield	23°C, 50 mm/Min	ISO 527-1/2	%	16 NOMINALE BRU
Tensile stress at break	23°C, 5 mm/Min	ISO 527-1/2	MPa	18 BRUCHSPANNU
Tensile strain at break	23°C, 5 mm/Min	ISO 527-1/2	%	20 BRUCHDEHNUNG
Flexural Modulus	23°C	ISO 178	MPa	22 BIEGEMODUL S
Flexural Strength	23°C	ISO 178	MPa	24 BIEGEFESTIGK
Charpy Impact Strength	23°C -30°C	ISO 179/1eU ISO 179/1eU	kJ/m ² kJ/m ²	NB-26 CHARPY- SZ NB-28 CHARPY- SZ
Charpy Notched Impact Strength	23°C -30°C	ISO 179/1eA ISO 179/1eA	kJ/m ² kJ/m ²	7-30 CHARPY-KSZ 6-32 CHARPY-KSZ
Izod Notched Impact Strength	23°C -30°C	ISO 180/1A ISO 180/1A	kJ/m ² kJ/m ²	-34 IZOD-KSZ 23 -36 IZOD-KSZ -3
Ball indentation hardness	358 N	ISO 2039-1	MPa	-38 KUGELDRUCKH
Thermal Properties				
Melting temperature	10 K/min	ISO 3146	°C	223-40 SCHMELZT
Temperature of deflection under load	0,45 MPa 1,8 MPa 8 MPa	ISO 75-1/2 ISO 75-1/2 ISO 75-1/2	°C °C °C	125-41 HDT-0,45 110-42 HDT-1,8 -43 HDT-8,0 MPA
Vicat Softening Temperature	VST A50 VST B50	ISO 306 ISO 306	°C °C	-40.1 VICAT A50 -40.2 VICAT B50
Coefficient of linear thermal expansion	parallel across	ISO 11359-2 ISO 11359-2	E-4/K E-4/K	0.9-44KOEFF.LÄN 1.0-45KOEFF.QUE
Thermal conductivity	Test plate 2 mm	DIN 52612-1	W/(m*K)	-46 WÄRMELEITFÄ
Maximum service temperature	some hours 20.000 h	IEC-60216 IEC-60216	°C °C	130-47 MAX.HSP 110-48 MAX2000H
Flammability		UL94 UL94 UL94 UL94	Wall thickness mm Rating Wall thickness mm Rating	1.6-49_UL94_WA1 V-0-50_UL94STU F -51UL94WAND2 -52 UL94_STUFE2



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Glow wire test GWIT		IEC-60695-2-13 IEC-60695-2-13 IEC-60695-2-13 IEC-60695-2-13	Wall thickness mm Temperature °C Wall thickness mm Temperature °C	-53GLÜHDRAHTW A1 -54GLÜHDRAHTE M1 -55 GLÜH WAND2 -56 GLÜHTEMP2
Glow wire test GWFI		IEC-60695-2-12 IEC-60695-2-12 IEC-60695-2-12 IEC-60695-2-12	Wall thickness mm Temperature °C Wall thickness mm Temperature °C	2-57GWFI#1 WAND 960-58GWFI#1 TE -59 GWFI#2 WAND -60 GWFI#2 T
Electrical Properties				
Relative Permittivity	1 MHz	IEC-62631-2-1	-	3.1-61DIELEKSPR
Dissipation Factor	1 MHz	IEC-62631-2-1	E-4	145-63DIELEKVER
Spec. Volume Resistivity	-	IEC-62631-3-1	Ohm*cm	>1.0E17-65SPDUR
Spec. Surface Resistivity	-	IEC-62631-3-2	Ohm	>1.0E15-67SPOBE
Dielectric Strength	-	IEC-60243-1	kV/mm	25-69DURCHSCHL A
Comparative Tracking Index (CTI)	-	IEC-60112	V	450-71CTI SPRIT
Other Data				
Water absorption	23°C, Saturation	ISO 62	%	0.21-73WASSER
Moisture absorption	23°C, 50% r.h.	ISO 62	%	0.09-74FEUCHTE A
Density	23°C	ISO 1183	g/cm ³	1.32-75DICHT
Melt Volume Rate (MVR)	Value Temperature Test Load	ISO 1133 ISO 1133 ISO 1133	cm ³ /10min °C kg	-76MVR-WERT -77_MVRTEMP -78 MVR-PRÜFLAS
Processing injection molding				
Melt temperature			°C	240-265-90 MAS
Mold temperature			°C	40-70-91 WERK
Guide Value Moisture			%	< 0.04-92 RESTF
Drying temperature			°C	100-120-93 TROC
Guide Value Drying time			h	4-94TROCKNUNG SD

Issue date 19.01.2019

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.