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ALBIS

Ultradur® B 4522 PRO

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Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	20	cm³/10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	1.5	%	ISO 294-4, 2577
Molding shrinkage, normal	1.7	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2400	MPa	ISO 527
Yield stress	55	MPa	ISO 527
Yield strain	3.7	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Tensile Creep Modulus, 1000h	1200	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	no break	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	240	kJ/m²	ISO 179/1eU
Type of failure	C	-	-
Notched Impact Strength (Charpy), +23°C	4	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	3.5	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C)	2400	MPa	ISO 178
Flexural strength	85	MPa	ISO 178
Ball Indentation Hardness	130	MPa	ISO 2039-1
ASTM Data			
Notched Impact Strength (Izod), 1/8 in	50	J/m	ASTM D 256

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	223	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	65	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	165	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	110	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	110	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94
Thickness tested	1.5	mm	-
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	0.8	mm	-
UL recognition	yes	-	-
Oxygen index	20	%	ISO 4589-1/-2
Glow Wire (GWFI, Flammability Index)	850	°C	IEC 60695-2-12
GWFI - thickness tested (1)	1.5	mm	-
Glow Wire Ignition Temperature)	775	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1.5	mm	-
ASTM Data			
UL 94 Flame rating	HB	-	UL 94
Thickness tested	3	mm	-
Thermal Conductivity, solid state	0.27	W/(m K)	DIN 52612-1
Specific Heat	1250	J/(kg K)	

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.4	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.3	-	IEC 62631-2-1
Dissipation Factor, 100Hz	20	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	200	E-4	IEC 62631-2-1
Volume Resistivity	1E14	Ohm*m	IEC 62631-3-1
Surface Resistivity	1E13	Ohm	IEC 62631-3-2
Electric Strength	36	kV/mm	IEC 60243-1
Comparative tracking index	550[1]	-	IEC 60112

1: Test liquid A

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Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.5	%	Sim. to ISO 62
Humidity absorption	0.25	%	Sim. to ISO 62
Density	1300	kg/m³	ISO 1183
Bulk density	750	kg/m³	-

Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Viscosity number	130	cm³/g	ISO 307, 1157, 1628

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Melt temperature	250 - 275	°C	-
Mold temperature	40 - 70	°C	-

Processing Recommendation Extrusion	Value	Unit	Test Standard
Melt temperature	250 - 275	°C	-

Characteristics

Processing

Injection Molding, Other Extrusion

Applications

Automotive, Medical

Certifications

Medical, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved, Drug Master File, Food approval, Food approval 10/2011, Food Contact (FDA)