

Datasheet

Durethan BKV30XTS3 000000

PA 6, 30% glass fibers, injection molding, heat-aging stabilized, high temperature stabilized

ISO Shortname: ISO 16396-PA 6,GF30,GHR,S14-100

Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.	
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.25	
C Molding shrinkage, transverse	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.7	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.05	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	10100	5500
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	185	80
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.5	5
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	80	90
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	60	60
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	11	19
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	<10	<10
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	75	80
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	60	60
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	12	20
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	11	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	9400	5500
Flexural strength	2 mm/min	MPa	ISO 178-A	270	140
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.8	5.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	270	120
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	221	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	200	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	215	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.2	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.1	
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB	
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB	
Burning behavior UL 94	3.0 mm	Class	UL 94	HB	
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	205	
Glow wire test (GWFI)	0.8 mm	°C	IEC 60695-2-12	725	
Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	725	
Glow wire test (GWFI)	3.0 mm	°C	IEC 60695-2-12	725	

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Glow wire test (GWIT)	0.8 mm	°C	IEC 60695-2-13	750	
Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	750	
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	750	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	3.65	9.78
C Relative permittivity	1 MHz	-	IEC 60250	4.66	4.08
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	0.03	0.12
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	0.03	0.09
C Volume resistivity		Ohm·m	IEC 62631-3	3.88E+12	9.6E+12
C Surface resistivity		Ohm	IEC 62631-3	8.81E+14	1.46E+15
C Electric strength	1 mm	kV/mm	IEC 60243-1	32.9	27.6
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	500	
Comparative tracking index CTI	Solution A	PLC	UL 746A	1	
Other properties (23 °C)					
C Density		kg/m ³	ISO 1183	1360	
Bulk density		kg/m ³	ISO 60	700	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	280	
C Injection molding-Mold temperature		°C	ISO 294	80	
Processing recommendations					
Drying temperature dry air dryer		°C	-	80	
Drying time dry air dryer		h	-	2-6	
Residual moisture content		%	Acc. to Karl Fischer	0.03-0.12	
Melt temperature (Tmin - Tmax)		°C	-	270-290	
admissible residence time at Tmax		min	-	<5	
Mold temperature		°C	-	80-100	

Notes

1 Typical properties: these are not to be construed as specifications

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

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Typical Properties

Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

Flammability

Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions.

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