

Datasheet

Durethan BKV30FN22 000000

PA 6, 30% glass fibers, injection molding, halogen free flame retardant

ISO Shortname: ISO 16396-PA 6,GF30 FR(30),GF2HR,S14-080

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.6	
C Molding shrinkage, transverse	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.7	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.2	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.2	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	7600	3400
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	95	50
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	4	28
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	50	85
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	< 10	
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	< 10	
Charpy notched impact strength	-40 °C	kJ/m ²	ISO 179-1eA	< 10	
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	35	80
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	< 10	
Izod notched impact strength	-40 °C	kJ/m ²	ISO 180-1A	< 10	
Flexural modulus	2 mm/min	MPa	ISO 178-A	7300	3200
Flexural strength	2 mm/min	MPa	ISO 178-A	170	75
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	4.0	6.9
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	170	65
Ball indentation hardness		N/mm ²	ISO 2039-1	194	
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	222	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	180	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	210	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	210	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.3	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.9	
C Burning behavior UL 94	1.5 mm	Class	UL 94	V-2	
C Burning behavior UL 94	0.75 mm	Class	UL 94	V-2	
C Oxygen index	Method A	%	ISO 4589-2	30	
Glow wire test (GWFI)	0.75 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	960	
Glow wire test (GWFI)	3.0 mm	°C	IEC 60695-2-12	960	

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Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	725
Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	725
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	725
Electrical properties (23 °C/50 % r. h.)				
C Volume resistivity		Ohm·m	IEC 62631-3	1E13
C Surface resistivity		Ohm	IEC 62631-3	1E13
C Electric strength	1 mm	kV/mm	IEC 60243-1	38
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	550
Comparative tracking index CTI	Solution A	PLC	UL 746A	1
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	5.9
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.8
C Density		kg/m ³	ISO 1183	1400
Bulk density		kg/m ³	ISO 60	700
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	260
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	0.03-0.07
Melt temperature (Tmin - Tmax)		°C	-	250-270
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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