Datasheet
Durethan BKV30FN00 000000

PA 6, 30% glass fibers, injection molding, halogen free flame retardant, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,GF30 FR(30+40+72),GF2HR,S14-110

Property	Test Condition	Unit	Standard	guide value [1] d.a.m.	guide value [1] cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.2	
C Molding shrinkage, transverse	60x60x2; 260 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.6	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
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	11000	6700
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	135	90
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.0	6.1
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	65	65
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	60	
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	<10	
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	<10	
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	55	55
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	55	
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	<10	
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	<10	
Flexural modulus	2 mm/min	MPa	ISO 178-A	10500	6000
Flexural strength	2 mm/min	MPa	ISO 178-A	225	140
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.1	4.6
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A		128
Ball indentation hardness		N/mm²	ISO 2039-1	220	
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	220	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	204	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	218	
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	0.2	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.8	
C Burning behavior UL 94	1.5 mm	Class	UL 94	V-0	
C Burning behavior UL 94	0.75 mm	Class	UL 94	V-0	
C Burning behavior UL 94-5V	1.5 mm	Class	UL 94	5VA	
C Oxygen index	Method A	%	ISO 4589-2	32	
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	209	

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Property	Test Condition	Unit	Standard	guide value [1] d.a.m.	cond.
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	
Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	775	
Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	775	
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	800	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	4.2	8.8
C Relative permittivity	1 MHz	-	IEC 60250	3.7	4.2
C Dissipation factor	100 Hz	10^{-4}	IEC 60250	160	1215
C Dissipation factor	1 MHz	10^{-4}	IEC 60250	155	695
C Volume resistivity		Ohm·m	IEC 62631-3	2.9E+13	7.1E+10
C Electric strength	1 mm	kV/mm	IEC 60243-1	40	36
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600	
Comparative tracking index CTI	Solution A	PLC	UL 746A	0	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	5	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.5	
C Density		kg/m³	ISO 1183	1443	
Bulk density		kg/m³	ISO 60	580	
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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