

Datasheet

Durethan BKV30H3.0EF 901510

PA 6, 30% glass fibers, injection molding, improved flowability, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,GF30,GHR,S10-090

Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.	
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 270 °C / WZ 80 °C; 600 bar	%	ISO 294-4	0.25	
C Molding shrinkage, transverse	60x60x2; 270 °C / WZ 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	9400	5500
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	170	100
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3	5.8
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	65	80
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	55	55
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	11	15
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	<10	<10
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	60	75
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	55	50
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	10	20
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	8400	5000
Flexural strength	2 mm/min	MPa	ISO 178-A	260	170
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.6	5.5
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	255	140
C Puncture maximum force	23 °C	N	ISO 6603-2	750	1050
C Puncture maximum force	-30 °C	N	ISO 6603-2	650	750
C Puncture energy	23 °C	J	ISO 6603-2	1.7	4.6
C Puncture energy	-30 °C	J	ISO 6603-2	1.3	1.4
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	210	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	215	
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	1	
Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	205	
Glow wire test (GWFI)	0.75 mm	°C	IEC 60695-2-12	675	

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Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	700	
Glow wire test (GWFI)	3.0 mm	°C	IEC 60695-2-12	700	
Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	700	
Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	675	
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	725	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	3.63	4.04
C Relative permittivity	1 MHz	-	IEC 60250	4.43	9.23
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	0.02	0.08
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	0.03	0.13
C Volume resistivity		Ohm·m	IEC 62631-3	1.1E+13	7.7E+10
C Surface resistivity		Ohm	IEC 62631-3	6.1E+14	4.1E+14
C Electric strength	1 mm	kV/mm	IEC 60243-1	31.6	29.1
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	7	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	2.1	
C Density		kg/m ³	ISO 1183	1360	
Bulk density		kg/m ³	ISO 60	650	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	270	
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	-	260-280	
Mold temperature		°C	-	80-120	

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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