

Datasheet

Durethan BKV230W1 000000

PA 6-Copolymer, 30% glass fibers, injection molding, improved impact strength, weather stabilized

ISO Shortname: ISO 16396-PA 6/66-I,GF30,GLR,S14-080

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	0.15	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	8200	4500
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	130	80
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	4	9
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	90	110
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	100	95
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	25	40
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	15	15
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	75	95
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	80	75
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	25	40
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	15	15
Flexural modulus	2 mm/min	MPa	ISO 178-A	7500	4300
Flexural strength	2 mm/min	MPa	ISO 178-A	210	120
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	5	7
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	200	100
C Puncture maximum force	23 °C	N	ISO 6603-2	1195	
C Puncture maximum force	-30 °C	N	ISO 6603-2	935	
C Puncture energy	23 °C	J	ISO 6603-2	6.8	
C Puncture energy	-30 °C	J	ISO 6603-2	3.5	
Ball indentation hardness		N/mm ²	ISO 2039-1	165	70
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	213	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	190	
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	200	
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	1.3	

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Property	Test Condition	Unit	Standard	guide value ¹	
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Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	3.8	14
C Relative permittivity	1 MHz	-	IEC 60250	3.6	4.1
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	70	3900
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	140	780
C Volume resistivity		Ohm-m	IEC 62631-3	1.00E+13	1E09
C Electric strength	1 mm	kV/mm	IEC 60243-1	43	30
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	475	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	6	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.8	
C Density		kg/m ³	ISO 1183	1320	
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	-	260-290	
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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Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

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