

Data sheet

Durethan BKV130GIT 900116

PA 6-Copolymer, 30 % glass fibers, injection molding, improved impact strength, GIT/WIT

ISO Shortname: ISO 16396-PA 6/66-I,GF30,GR,S14-090

Property	Test Condition	Unit	Standard	guide value	
				d.a.m.	cond.
Rheological properties					
Molding shrinkage, parallel	150x105x3; 280 °C / MT 80 °C; 400 % bar		acc. ISO 2577	0.13	
Molding shrinkage, transverse	150x105x3; 280 °C / MT 80 °C; 400 % bar		acc. ISO 2577	0.64	
Post- shrinkage, parallel	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.04	
Post- shrinkage, transverse	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.14	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	8800	5000
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	160	95
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.5	8.9
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	85	85
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	65	60
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	15	20
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	75
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	60	50
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	15	15
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	10	10
Flexural modulus	2 mm/min	MPa	ISO 178-A	8200	4500
Flexural strength	2 mm/min	MPa	ISO 178-A	250	140
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	4.0	7.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	220	110
C Puncture maximum force	23 °C	N	ISO 6603-2	919	
C Puncture maximum force	-30 °C	N	ISO 6603-2	772	
C Puncture energy	23 °C	J	ISO 6603-2	9	13
C Puncture energy	-30 °C	J	ISO 6603-2	6	
Ball indentation hardness		N/mm²	ISO 2039-1	180	
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	
C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	80	
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	0.9	
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB	
C Oxygen index	Method A	%	ISO 4589-2	24	
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	650	
Burning behavior US-FMVSS302	>=1.0 mm		ISO 3795	passed	
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	200	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	4.5	12
C Relative permittivity	1 MHz	-	IEC 60250	4.0	4.5
C Dissipation factor	100 Hz	10-4	IEC 60250	70	1600
C Dissipation factor	1 MHz	10-4	IEC 60250	200	900
C Volume resistivity		Ohm ·m	IEC 60093	1E13	1E10
C Surface resistivity		Ohm	IEC 60093	1E15	1E14
C Electric strength	1 mm	kV/mm	IEC 60243-1	32	32
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600	
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	400 (325) M	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	6.5	

C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.9
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	-	260-290
Mold temperature	°C	-	80-100

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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Color and Visual Effects

Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.

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