

Datasheet

Durethan BKV50PH3.0 901510

PA 6, 50% glass fibers, injection molding, heat-aging stabilized, improved fatigue behavior

ISO Shortname: ISO 16396-PA 6,GF50,GHR,S14-160

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2	%	ISO 294-4	0.3	
C Molding shrinkage, transverse	60x60x2	%	ISO 294-4	0.75	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.05	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.10	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	16500	9900
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	215	140
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.0	6.0
Tensile modulus	1 mm/min; 120 °C	MPa	ISO 527-1,-2	6500	
Tensile Stress at break	5 mm/min; 120 °C	MPa	ISO 527-1,-2	105	
Tensile Strain at break	5 mm/min; 120 °C	%	ISO 527-1,-2	7.5	
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	95	95
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	95	90
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	17	25
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	85	90
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	85	85
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	17	30
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	15	15
Flexural modulus	2 mm/min	MPa	ISO 178-A	16200	10300
Flexural strength	2 mm/min	MPa	ISO 178-A	350	230
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3	5
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A		205
Ball indentation hardness		N/mm ²	ISO 2039-1	275	
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	210	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	220	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	215	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.15	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.8	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	4.7	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.6	

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C Density		kg/m ³	ISO 1183	1580
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	-	270-290
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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