

Datasheet

Durethan BKV115H3.0 000000

PA 6-Copolymer, 15% glass fibers, injection molding, improved impact strength, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6/66-I,GF15,GHR,S14-060

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	0.4	
C Molding shrinkage, transverse	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.5	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
Post- shrinkage, transverse	60x60x2; 120 °C	%	ISO 294-4	0.1	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	5600	2700
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	110	55
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	4.5	14.0
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	60	80
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	45	45
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	<10	15
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	<10	<10
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	55	80
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	40	45
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	<10	15
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	5200	2400
Flexural strength	2 mm/min	MPa	ISO 178-A	180	90
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	5.5	7
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	160	65
C Puncture maximum force	23 °C	N	ISO 6603-2	700	3300
C Puncture maximum force	-30 °C	N	ISO 6603-2	600	700
C Puncture energy	23 °C	J	ISO 6603-2	2	9.2
C Puncture energy	-30 °C	J	ISO 6603-2	1.6	1.7
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	212	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	185	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	205	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	198	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.3	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.2	
C Burning behavior UL 94	1.5 mm	Class	UL 94	HB	
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB	

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Property	Test Condition	Unit	Standard	guide value ¹ <small>d.a.m. cond.</small>
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	650
Burning behavior US-FMVSS302	2.0 mm		ISO 3795	passed
Electrical properties (23 °C/50 % r. h.)				
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	8.5
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	2.5
C Density		kg/m ³	ISO 1183	1230
Bulk density		kg/m ³	ISO 60	600
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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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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