

Datasheet

Durethan BCF30XH2.0 901510

PA 6, 30% glass fibers/carbon fibers, injection molding, heat-aging stabilized, improved electrical conductivity

ISO Shortname: ISO 16396-PA 6,(GF+CF)30,GHR,S14-140

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Melt volume-flow rate	260 °C; 5 kg	cm ³ /(10 min)	ISO 1133-1	15	
Molding shrinkage, parallel	150x105x3; 280 °C / MT 80 °C; 500 bar	%	acc. ISO 294-4	0.15	
Molding shrinkage, transverse	150x105x3; 280 °C / MT 80 °C; 500 bar	%	acc. ISO 294-4	0.75	
Post- shrinkage, parallel	150x105x3; 120 °C; 4 h	%	acc. ISO 294-4	0.03	
Post- shrinkage, transverse	150x105x3; 120 °C; 4 h	%	acc. ISO 294-4	0.1	
C Molding shrinkage, parallel	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.22	
C Molding shrinkage, transverse	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.77	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.03	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.08	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	13500	6700
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	195	100
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.1	5.0
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	75	80
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	60	60
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	11	
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	<10	
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	65	65
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	60	60
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	10	
Flexural modulus	2 mm/min	MPa	ISO 178-A	11500	6800
Flexural strength	2 mm/min	MPa	ISO 178-A	280	160
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.5	5.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A		145
C Puncture energy	23 °C	J	ISO 6603-2	2.4	
C Puncture energy	-30 °C	J	ISO 6603-2	1.7	
Ball indentation hardness		N/mm ²	ISO 2039-1	211	
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	205	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	219	

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C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	140
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	214
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 Burning behavior UL 94	0.75 mm	Class	UL 94	HB
Burning behavior US-FMVSS302	>=1.0 mm		ISO 3795	passed
Electrical properties (23 °C/50 % r. h.)				
C Volume resistivity		Ohm-m	IEC 62631-3	2.00E+03
C Surface resistivity		Ohm	IEC 62631-3	4.00E+04
Other properties (23 °C)				
C Density		kg/m ³	ISO 1183	1334
Bulk density		kg/m ³	ISO 60	680
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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Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

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