

Datasheet

Durethan BC30S 000000

PA 6, non-reinforced, injection molding, improved impact strength

ISO Shortname: ISO 16396-PA 6-I,,GR,S14-030

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 270 °C / WZ 80 °C; 600 bar	%	ISO 294-4	1	
C Molding shrinkage, transverse	60x60x2; 270 °C / WZ 80 °C; 600 bar	%	ISO 294-4	0.9	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.3	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.3	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	3200	1000
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	80	45
C Yield strain	50 mm/min	%	ISO 527-1,-2	4	24
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	N	N
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	N	
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	<10	30
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	n.b.	n.b.
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	200	
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	<10	20
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	2800	1000
Flexural strength	2 mm/min	MPa	ISO 178-A	105	40
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	6.0	7.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	90	30
C Puncture maximum force	23 °C	N	ISO 6603-2	5000	
C Puncture maximum force	-30 °C	N	ISO 6603-2	4400	
C Puncture energy	23 °C	J	ISO 6603-2	55	
C Puncture energy	-30 °C	J	ISO 6603-2	25	
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	221	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	66	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	172	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	1.0	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.8	
Electrical properties (23 °C/50 % r. h.)					
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600	

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Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	10
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	3
C Density		kg/m ³	ISO 1183	1122
Bulk density		kg/m ³	ISO 60	600
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	270
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	-	260-280
Mold temperature		°C	-	80-90

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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