

Datasheet

Durethan BTC77ZH3.0EF 900117

PA 6, 77% mineral, injection molding, improved heat conductivity, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,MD77,GHR,S10-140

Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.	
Rheological properties					
C Molding shrinkage, parallel	60x60x2	%	ISO 294-4	0.7	
C Molding shrinkage, transverse	60x60x2	%	ISO 294-4	0.6	
Post- shrinkage, parallel	60x60x2	%	ISO 294-4	0.1	
Post- shrinkage, transverse	60x60x2	%	ISO 294-4	0.1	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	13600	5000
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	95	60
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.8	5
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	35	50
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	20	20
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	<10	<10
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	<10	<10
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	35	20
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	20	20
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	<10	<10
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	14000	6000
Flexural strength	2 mm/min	MPa	ISO 178-A	180	110
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3	4
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A		100
Ball indentation hardness		N/mm²	ISO 2039-1	410	229
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	222	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	142	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	191	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	208	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.4	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.4	
Thermal conductivity, in-plane		W/(m·K)	ISO 22007-4	1.8	
Thermal conductivity, through-plane		W/(m·K)	ISO 22007-4	1.7	
C Burning behavior UL 94	0.75 mm	Class	UL 94	HB	
Electrical properties (23 °C/50 % r. h.)					
C Volume resistivity		Ohm·m	IEC 62631-3	1.40E+13	
C Surface resistivity		Ohm	IEC 62631-3	6.60E+13	

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Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.
C Electric strength	1 mm	kV/mm	IEC 60243-1	31
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600
Other properties (23 °C)				
C Density		kg/m ³	ISO 1183	2510
Bulk density		kg/m ³	ISO 60	1374
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	290
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
Melt temperature (Tmin - Tmax)		°C	-	280-300
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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