

Datasheet

Durethan BM40XH3.0EF 000000

PA 6, 40% glass fibers/mineral, injection molding, improved flowability, heat-aging stabilized, low tendency to warp, improved surface finish

ISO Shortname: ISO 16396-PA 6,(GF+MD)40,GHR,S10-080

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 290 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.3	
C Molding shrinkage, transverse	60x60x2; 290 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.7	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.2	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	8500	4600
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	125	65
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.3	5.6
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	35	55
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	35	45
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	<10	<10
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	30	45
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	30	30
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	<10	<10
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	8800	4800
Flexural strength	2 mm/min	MPa	ISO 178-A	200	125
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	2.7	4.5
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	115	
Thermal properties					
C Melting temperature	10 °C/min	°C	ISO 11357-1,-3	219	
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	196	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	217	
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	0.9	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	5.8	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	1.7	
C Density		kg/m ³	ISO 1183	1460	
Bulk density		kg/m ³	ISO 60	700	

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Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.
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
Residual moisture content		%	Acc. to Karl Fischer	0.03-0.12
Melt temperature (Tmin - Tmax)		°C	-	280-300
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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