

Durethan BG30XXF 000000

PA 6, 30 % glass fibers/glass spheres, injection molding, improved flowability, improved surface finish, low tendency to warp

ISO Shortname: ISO 16396-PA 6,(GB+GF)30,GR,S10-050

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
C Molding shrinkage, parallel	60x60x2; 270 °C / WZ 120 °C; 600 bar	%	ISO 294-4	0.6	
C Molding shrinkage, transverse	60x60x2; 270 °C / WZ 120 °C; 600 bar	%	ISO 294-4	0.75	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.1	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.15	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	5200	2600
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	85	45
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	3.2	6.9
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	50	55
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	40	35
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	40	50
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	35	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	5000	2500
Flexural strength	2 mm/min	MPa	ISO 178-A	140	80
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	3.8	6.3
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	135	65
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	185	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	210	
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	195	
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	1.1	
Electrical properties (23 °C/50 % r. h.)					
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	475	
Other properties (23 °C)					
C Density		kg/m ³	ISO 1183	1320	
Bulk density		kg/m ³	ISO 60	700	
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	



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Property	Test Condition	Unit	Standard	guide value ¹ d.a.m. cond.
Drying time dry air dryer		h	-	2-6
Residual moisture content		%	Acc. to Karl Fischer	0.03-0.12
Melt temperature (Tmin - Tmax)		°C	-	250-290
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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Typical Properties

Property data is provided as general information only. Property values are approximate and are not part of the product specifications.

Flammability

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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Color and Visual Effects

Type and quantity of pigments or additives used to obtain certain colors and special visual effects can affect mechanical properties.

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