

Durethan BG60XXF 900116

PA 6, 60 % glass fibers/glass spheres, injection molding, heat-aging stabilized, improved flowability, low tendency to warp

ISO Shortname: ISO 16396-PA 6,(GF+GB)60,GHR,S10-190

Property	Test Condition	Unit	Standard	guide value ¹	
				d.a.m.	cond.
Rheological properties					
Molding shrinkage, parallel	150x105x3; 270 °C / WZ 80 °C; 500 bar	%	acc. ISO 2577	0.2	
Molding shrinkage, transverse	150x105x3; 270 °C / WZ 80 °C; 500 bar	%	acc. ISO 2577	0.55	
Post- shrinkage, parallel	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.05	
Post- shrinkage, transverse	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.1	
C Molding shrinkage, parallel	60x60x2; 270 °C / WZ 120 °C; 600 bar	%	ISO 294-4	0.35	
C Molding shrinkage, transverse	60x60x2; 270 °C / WZ 120 °C; 600 bar	%	ISO 294-4	0.4	
Post- shrinkage, parallel	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.05	
Post- shrinkage, transverse	60x60x2; 120 °C; 4 h	%	ISO 294-4	0.05	
Mechanical properties (23 °C/50 % r. h.)					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	19000	12300
C Tensile Stress at break	5 mm/min	MPa	ISO 527-1,-2	210	135
C Tensile Strain at break	5 mm/min	%	ISO 527-1,-2	2.2	3.3
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	85	75
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	75	70
C Charpy notched impact strength	23 °C	kJ/m²	ISO 179-1eA	15	20
C Charpy notched impact strength	-30 °C	kJ/m²	ISO 179-1eA	15	15
Izod impact strength	23 °C	kJ/m²	ISO 180-1U	80	70
Izod impact strength	-30 °C	kJ/m²	ISO 180-1U	75	65
Izod notched impact strength	23 °C	kJ/m²	ISO 180-1A	15	20
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-1A	15	15
Flexural modulus	2 mm/min	MPa	ISO 178-A	18000	12000
Flexural strength	2 mm/min	MPa	ISO 178-A	340	210
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	2.5	3
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	210	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	218	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.11	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.85	
Other properties (23 °C)					
C Density		kg/m³	ISO 1183	1680	
Bulk density		kg/m³	ISO 60	760	
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					



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Property	Test Condition	Unit	Standard	guide value ¹
				d.a.m. cond.
Drying temperature dry air dryer		°C	-	80
Drying time dry air dryer		h	-	2-6
Residual moisture content		%	Acc. to Karl Fischer	0.05-0.15
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.

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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