

# Datasheet

## Durethan BG30XW1 000000

PA 6, 30% glass fibers/glass spheres, injection molding, low tendency to warp, weather stabilized

ISO Shortname: ISO 16396-PA 6,(GB+GF)30,GLR,S14-060

Property	Test Condition	Unit	Standard	guide value <sup>1</sup>	
				d.a.m.	cond.
<b>Rheological properties</b>					
C Molding shrinkage, parallel	60x60x2; 280 °C / MT 80 °C; 600 bar	%	ISO 294-4	0.5	
C Molding shrinkage, transverse	60x60x2; 280 °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	
<b>Mechanical properties (23 °C/50 % r. h.)</b>					
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	6400	3200
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	4	10
C Charpy impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eU	45	75
C Charpy impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eU	40	45
C Charpy notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eA	<10	10
C Charpy notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eA	<10	<10
Izod impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1U	35	80
Izod impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1U	30	40
Izod notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1A	<10	<10
Izod notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1A	<10	<10
Flexural modulus	2 mm/min	MPa	ISO 178-A	5800	2800
Flexural strength	2 mm/min	MPa	ISO 178-A	185	100
Flexural strain at flexural strength	2 mm/min	%	ISO 178-A	5.0	8.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178-A	175	80
C Puncture maximum force	23 °C	N	ISO 6603-2	700	1540
C Puncture maximum force	-30 °C	N	ISO 6603-2	690	780
C Puncture energy	23 °C	J	ISO 6603-2	2	2.8
C Puncture energy	-30 °C	J	ISO 6603-2	1.7	2
Ball indentation hardness		N/mm <sup>2</sup>	ISO 2039-1	185	75
<b>Thermal properties</b>					
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	190	
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	>200	
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.3	
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.9	
Burning behavior US-FMVSS302			ISO 3795	passed	

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Property	Test Condition	Unit	Standard	guide value <sup>1</sup> d.a.m. cond.
<b>Other properties (23 °C)</b>				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	7.0
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	2.2
C Density		kg/m <sup>3</sup>	ISO 1183	1360
Bulk density		kg/m <sup>3</sup>	ISO 60	700
<b>Processing conditions for test specimens</b>				
C Injection molding-Melt temperature		°C	ISO 294	280
C Injection molding-Mold temperature		°C	ISO 294	80
<b>Processing recommendations</b>				
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	-	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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