

Durethan BG 30 X 000000

Injection molding grade with good surface finish and reinforced with 30% glass fiber / glass bead, low warpage

ISO Shortname: ISO 1874-PA 6,MR,14-060,(GB+GF)30

Property	Test Condition	Unit	Standard	guide value	
				d.a.m.	cond.
Rheological properties					
C Melt volume-flow rate	260 °C; 5 kg	cm ³ /(10 min)	ISO 1133	30	
Molding shrinkage, parallel	150x105x3; 280 °C / MT 80 °C; 500 bar	%	acc. ISO 2577	0.33	
Molding shrinkage, transverse	150x105x3; 280 °C / MT 80 °C; 500 bar	%	acc. ISO 2577	0.87	
Post- shrinkage, parallel	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.06	
Post- shrinkage, transverse	150x105x3; 120 °C; 4 h	%	acc. ISO 2577	0.16	
Mechanical properties (23 °C/50 % r. h.)					
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	4.0	10
C Tensile creep modulus	1 h	MPa	ISO 899-1		2400
C Tensile creep modulus	1000 h	MPa	ISO 899-1		2000
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	50	75
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	45	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
Charpy notched impact strength	-40 °C	kJ/m ²	ISO 179-1eA	< 10	< 10
Izod impact strength	23 °C	kJ/m ²	ISO 180-1U	35	80
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1U	30	40
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	< 10	< 10
Izod notched impact strength	-40 °C	kJ/m ²	ISO 180-1A	< 10	< 10
Flexural modulus	2 mm/min	MPa	ISO 178	5800	2800
Flexural strength	2 mm/min	MPa	ISO 178	195	100
Flexural strain at flexural strength	2 mm/min	%	ISO 178	5.0	8.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178	175	80
C Puncture maximum force	23 °C	N	ISO 6603-2	701	
C Puncture maximum force	-30 °C	N	ISO 6603-2	686	
C Puncture energy	23 °C	J	ISO 6603-2	2.0	
C Puncture energy	-30 °C	J	ISO 6603-2	1.7	
Ball indentation hardness		N/mm ²	ISO 2039-1	185	75
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	~190	
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	~210	
C Temperature of deflection under load	8.00 MPa	°C	ISO 75-1,-2	~60	



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Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	> 200	
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	
C Burning behavior UL 94 (1.6 mm)	1.6 mm	Class	UL 94	HB	
C Burning behavior UL 94	3.2 mm	Class	UL 94	HB	
C Oxygen index	Method A	%	ISO 4589-2	23	
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	650	
Burning rate (US-FMVSS)		mm/min	ISO 3795	passed	
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	> 200	
Electrical properties (23 °C/50 % r. h.)					
C Relative permittivity	100 Hz	-	IEC 60250	4.5	16
C Relative permittivity	1 MHz	-	IEC 60250	4.0	4.8
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	130	3100
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	180	1000
C Volume resistivity		Ohm-m	IEC 60093	1E13	1E09
C Surface resistivity		Ohm	IEC 60093	1E14	1E12
C Electric strength	1 mm	kV/mm	IEC 60243-1	36	30
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	400 - 1,5	
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	225 M -1.5	
Other properties (23 °C)					
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	~7	
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	~2.2	
C Density		kg/m ³	ISO 1183	1360	
Glass fiber / glass bead / filler content		%	ISO 3451-1	30	
Bulk density		kg/m ³	ISO 60	~700	
Processing conditions for test specimens					
C Injection molding-Melt temperature		°C	ISO 294	280	
C Injection molding-Mold temperature		°C	ISO 294	80	
Processing recommendations					
Drying temperature		°C	-	80	
Drying time dry air dryer		h	-	2-6	
Residual moisture content		%	Acc. to Karl Fischer	0.03-0.12	
Melt temperature		°C	-	270-290	
Mold temperature		°C	-	80-120	

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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