

# Durethan<sup>®</sup> BG30X

## PA6—(GF+GB)30

Injection Molding, 30% Glass Fiber/Glass Beads, Low Warpage

Print Date: 2024-12-10

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
<b>RHEOLOGICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Molding shrinkage (parallel)	0.48 / *	%	ISO 294-4
Molding shrinkage (normal)	0.77 / *	%	ISO 294-4
<b>MECHANICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Tensile modulus	6300 / 3100	MPa	ISO 527-1/-2
Stress at break	125 / 65	MPa	ISO 527-1/-2
Strain at break	4 / 10	%	ISO 527-1/-2
Flexural modulus	5800 / 2800	MPa	ISO 178
Flexural strength	185 / 100	MPa	ISO 178
Tensile modulus (200°C)	1500	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	45 / 75	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	40 / 45	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<10 / 10	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<10 / <10	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength (-40°C)	<10 / <10	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL PROPERTIES</b>			
	<b>DRY / COND</b>		
Melting temperature (10°C/min)	222 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	190 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	210 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.3 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.9 / *	E-4/°C	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10

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Thickness tested	1.5 / *	mm	IEC 60695-11-10
Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10
Burning Behav. at 0.75 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
Oxygen index	23 / *	%	ISO 4589-1/-2
Glow Wire Flammability Index GWFI	650 / -	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	2 / -	mm	IEC 60695-2-12
<b><i>ELECTRICAL PROPERTIES</i></b>	<b><i>DRY / COND</i></b>		
Relative permittivity (100Hz)	4.5 / 16	-	IEC 62631-2-1
Relative permittivity (1 MHz)	4 / 4.8	-	IEC 62631-2-1
Dissipation factor (100 Hz)	130 / 3100	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	180 / 1000	E-4	IEC 62631-2-1
Volume resistivity	1E13 / 1E9	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E12	Ohm	IEC 62631-3-2
Electric strength	36 / 30	kV/mm	IEC 60243-1
Comparative tracking index	400 / -	V	IEC 60112
<b><i>OTHER PROPERTIES</i></b>	<b><i>DRY / COND</i></b>		
Water absorption	7 / *	%	Sim. to ISO 62
Humidity absorption	2.2 / *	%	Sim. to ISO 62
Density	1350 / -	kg/m³	ISO 1183
<b><i>MATERIAL SPECIFIC PROPERTIES</i></b>	<b><i>DRY / COND</i></b>		
Viscosity number	140 / *	cm³/g	ISO 307, 1157, 1628
<b><i>PROCESSING RECOMMENDATIONS</i></b>	<b><i>VALUE</i></b>		
Drying temperature dry air dryer	80	°C	

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Drying time dry air dryer	2-6	h	
Residual moisture content	0.03-0.12	%	acc. to Karl Fischer
Melt temperature (Tmin – Tmax)	270-290	°C	
Mold temperature	80-120	°C	

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