

Durethan® BG30XH3.0 000000
PA6-(GF+GB)30

Envalior

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

ISO 1043 PA6-(GF+GB)30

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.5 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.8 / *	%	ISO 294-4, 2577
Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	6400 / 3100	MPa	ISO 527
Stress at Break	120 / 65	MPa	ISO 527
Strain at Break	4 / 10	%	ISO 527
Tensile Creep Modulus, 1h	* / 2400	MPa	ISO 899-1
Tensile Creep Modulus, 1000h	* / 2000	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	45 / 75	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	40 / 45	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	- / 10	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	- / 10	kJ/m²	ISO 179/1eA
Puncture - maximum force, +23°C	700 / 1540	N	ISO 6603-2
Puncture - maximum force, -30°C	630 / 780	N	ISO 6603-2
Puncture energy, +23°C	2.2 / 2.8	J	ISO 6603-2
Puncture energy, -30°C	1.6 / 2	J	ISO 6603-2
Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
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	30 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	90 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB / *	class	UL 94
Thickness tested	1.5 / *	mm	-
Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.5 / -	-	IEC 62631-2-1
Relative permittivity, 1MHz	4 / -	-	IEC 62631-2-1
Dissipation Factor, 100Hz	265 / -	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	220 / -	E-4	IEC 62631-2-1
Volume Resistivity	1E13 / -	Ohm*m	IEC 62631-3-1
Comparative tracking index	375 / -	-	IEC 60112
Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	7 / *	%	Sim. to ISO 62
Humidity absorption	2.2 / *	%	Sim. to ISO 62
Density	1350 / -	kg/m³	ISO 1183
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	140 / *	cm³/g	ISO 307, 1157, 1628
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	280	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

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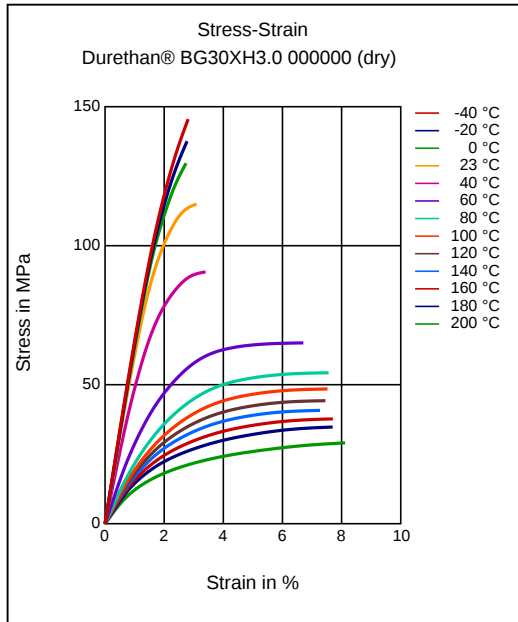
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Processing Recommendation Injection Molding

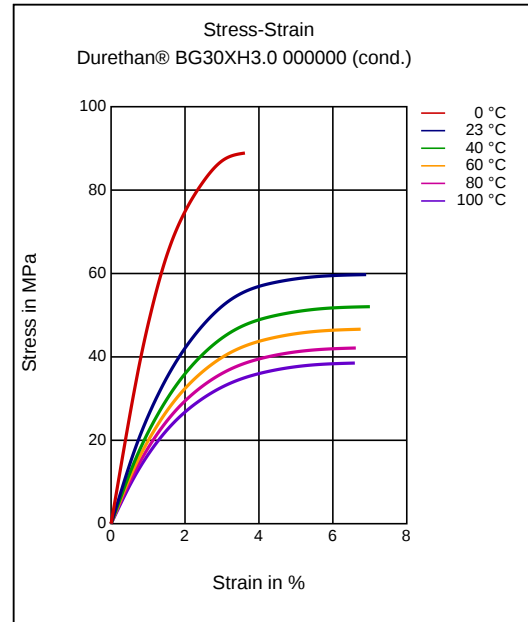
	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.12	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	80 - 120	°C	-

Diagrams

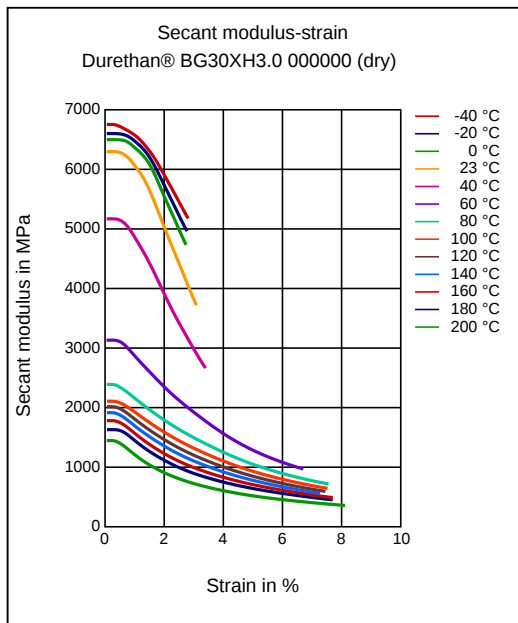
Stress-strain



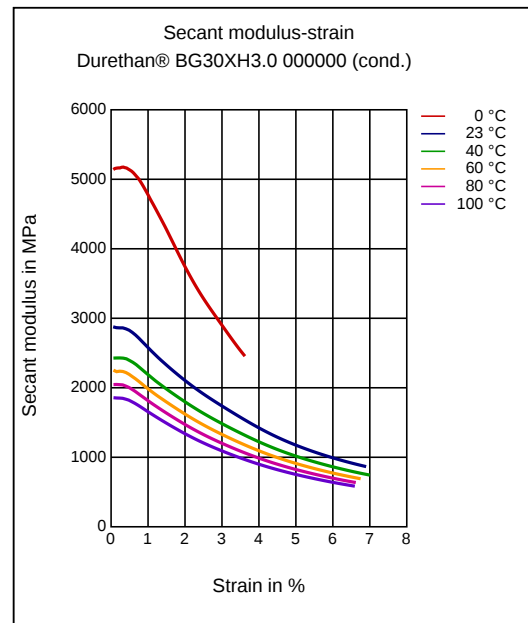
Stress-strain



Secant modulus-strain



Secant modulus-strain



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Characteristics

Processing

Injection Molding

Special Characteristics

Heat aging stabilized

Delivery form

Pellets

Features

Low Warpage

Additives

Release agent

Injection Molding

PREPROCESSING

Residual moisture content: 0.03 - 0.12%

Drying temperature dry air dryer: 80 °C

Drying time dry air dryer 2 - 6 h

PROCESSING

Melt temperature (Tmin - Tmax): 270 - 290 °C

Mold temperature: 80 - 120 °C