

Durethan® BG30XFN01 000000
PA6-(GF+GB)30 FR(40)

Envalior

Injection Molding, 30% Glass Fiber/Glass Beads, Flame Retardant (halogen free), Heat Stabilized, Improved flow, Excellent Surface Properties

ISO 1043 PA6-(GF+GB)30 FR(40)

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	27 / *	cm³/10min	ISO 1133
Temperature	260 / *	°C	-
Load	2.16 / *	kg	-
Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	7400 / 3500	MPa	ISO 527
Stress at Break	85 / 50	MPa	ISO 527
Strain at Break	3 / 7	%	ISO 527
Impact Strength (Charpy), +23°C	40 / 45	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	35 / 35	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
Flexural Modulus (23°C)	7000 / 3700	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	10 / 10	kJ/m²	ISO 180/1A
Notched Impact Strength (Izod)	10 / 10	kJ/m²	ISO 180/1A
Temperature	-30	°C	-
Impact Strength (Izod), 23°C	35 / 38	kJ/m²	ISO 180/1U

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)	214 / *	°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	80 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	V-0 / *	class	UL 94
Burning Behav. 5V at Thickness h	5VA / *	class	IEC 60695-11-20
Thickness tested	2.0 / *	mm	-
Oxygen index	34.6 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Electric Strength	32 / -	kV/mm	IEC 60243-1
Comparative tracking index	575 / -	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	5.3 / *	%	Sim. to ISO 62
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1390 / -	kg/m³	ISO 1183
Bulk density	700	kg/m³	-

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	260	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.07	%	-

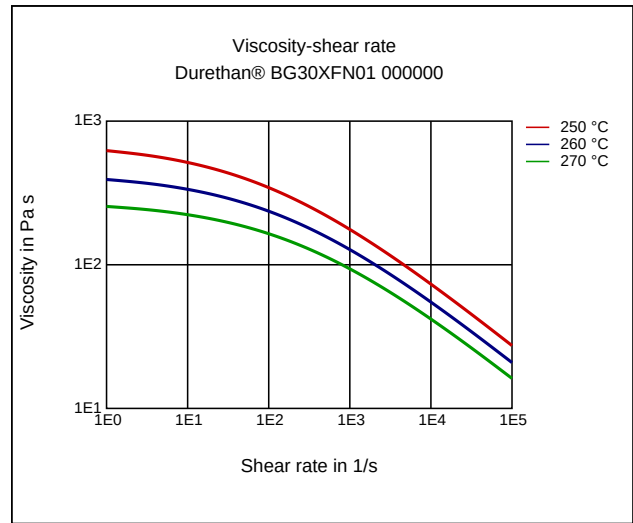
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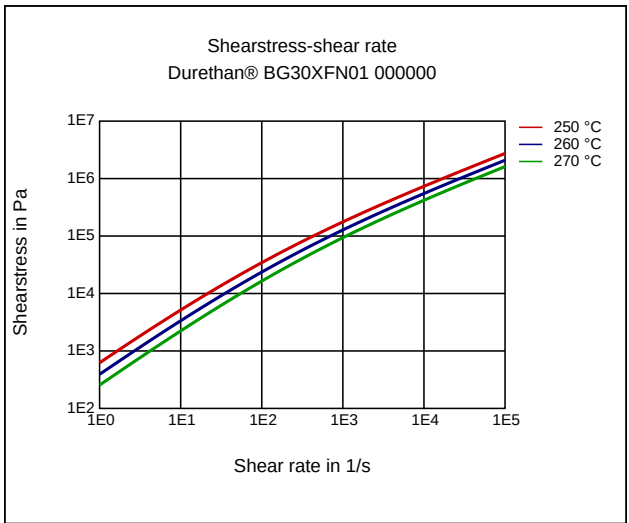
Melt temperature	250 - 270	°C	-
Mold temperature	80 - 100	°C	-

Diagrams

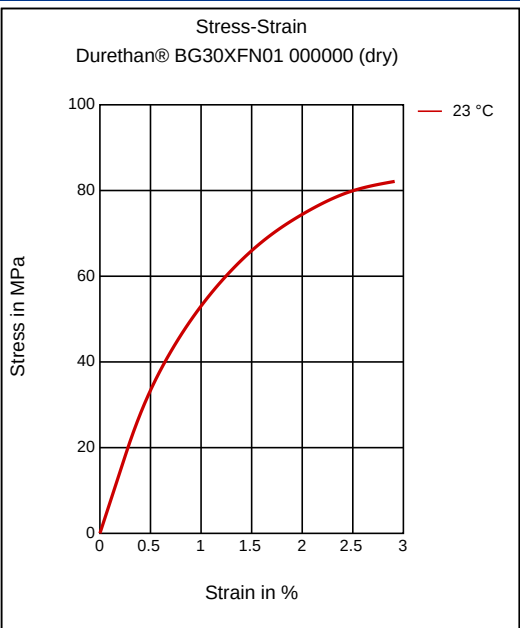
Viscosity-shear rate



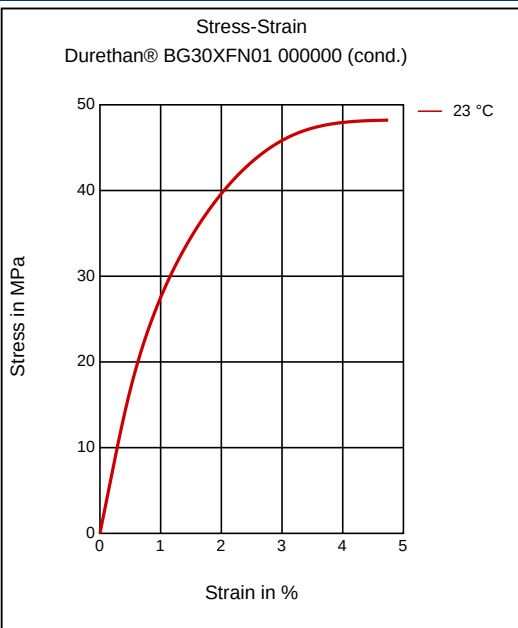
Shearstress-shear rate



Stress-strain



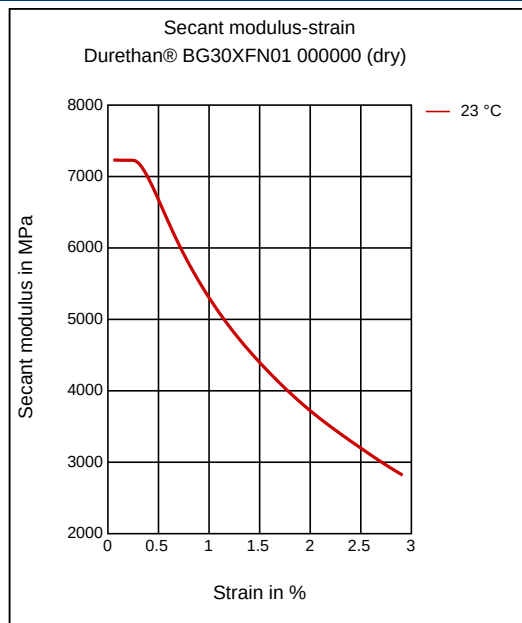
Stress-strain



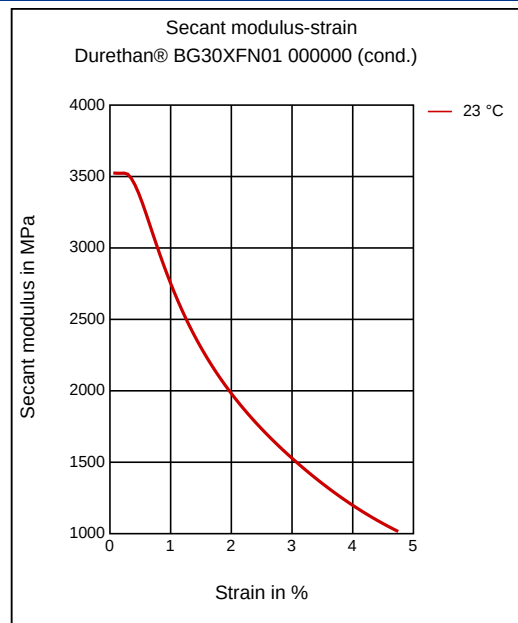
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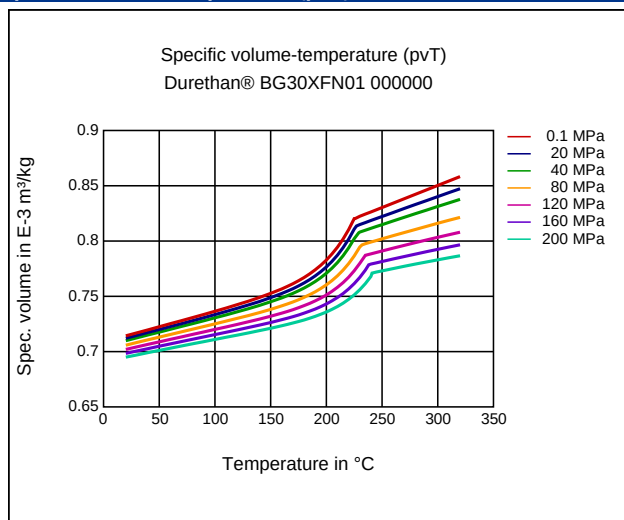
Secant modulus-strain



Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Injection Molding

PREPROCESSING

Residual moisture content: 0.03 - 0.07%

Drying temperature dry air dryer: 80 °C

Drying time dry air dryer 2 - 6 h

PROCESSING

Melt temperature (Tmin - Tmax): 250 - 270 °C

Mold temperature: 80 - 100 °C

Special Characteristics

Flame retardant, Halogen-free, Heat aging stabilized