

Durethan® BKV20FN01 000000
PA6-GF18 FR(40+30)

Envalior

Injection Molding, 18% Glass Reinforced, Flame Retardant (halogen free), Heat Stabilized

ISO 1043 PA6-GF18 FR(40+30)

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	37 / *	cm ³ /10min	ISO 1133
Temperature	260 / *	°C	-
Load	5 / *	kg	-
Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	7960 / 4500	MPa	ISO 527
Stress at Break	105 / 60	MPa	ISO 527
Strain at Break	3 / 4.9	%	ISO 527
Impact Strength (Charpy), +23°C	50 / 60	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	- / 12	kJ/m ²	ISO 179/1eA
Flexural Modulus (23°C)	7200 / 4200	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	10 / 12	kJ/m ²	ISO 180/1A
Impact Strength (Izod), 23°C	40 / 45	kJ/m ²	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)	200 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	218 / *	°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.	V-0 / *	class	UL 94
Burning Behav. 5V at Thickness h	5VA / *	class	IEC 60695-11-20
Thickness tested	3.0 / *	mm	-
Oxygen index	34 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4 / 9	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.5 / 4	-	IEC 62631-2-1
Dissipation Factor, 100Hz	165 / 1250	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	170 / 775	E-4	IEC 62631-2-1
Volume Resistivity	>1E13 / 1.2E11	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 3.7E14	Ohm	IEC 62631-3-2
Electric Strength	36 / 35	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	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	1340 / -	kg/m ³	ISO 1183

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	%	-

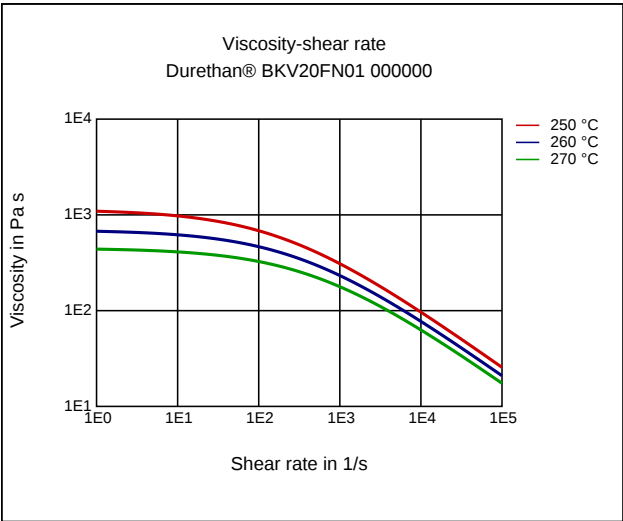
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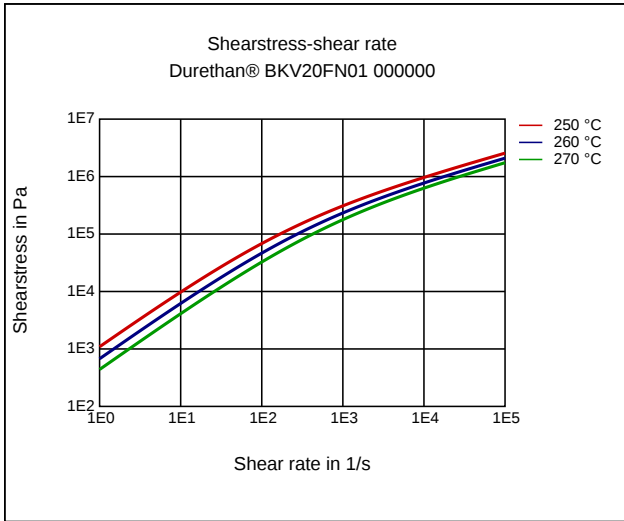
Melt temperature	250 - 270	°C	-
Mold temperature	80 - 100	°C	-

Diagrams

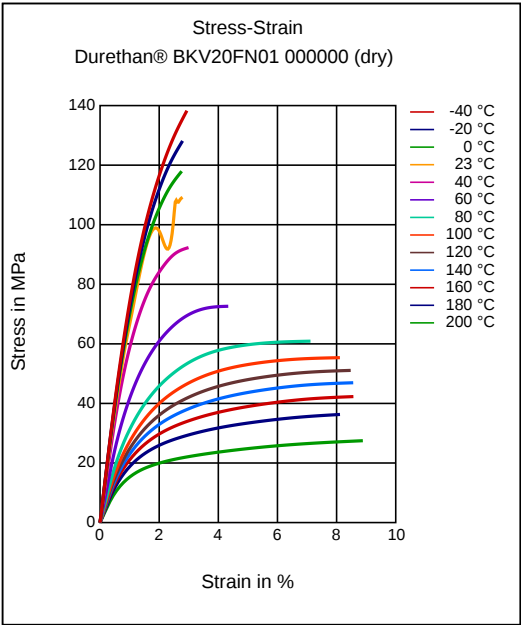
Viscosity-shear rate



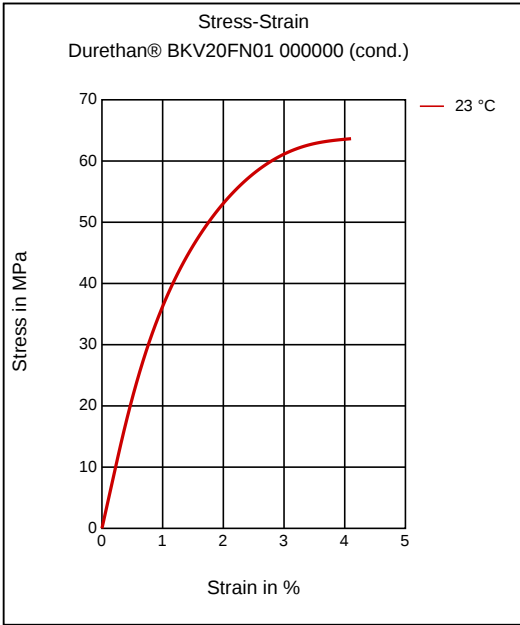
Shearstress-shear rate



Stress-strain



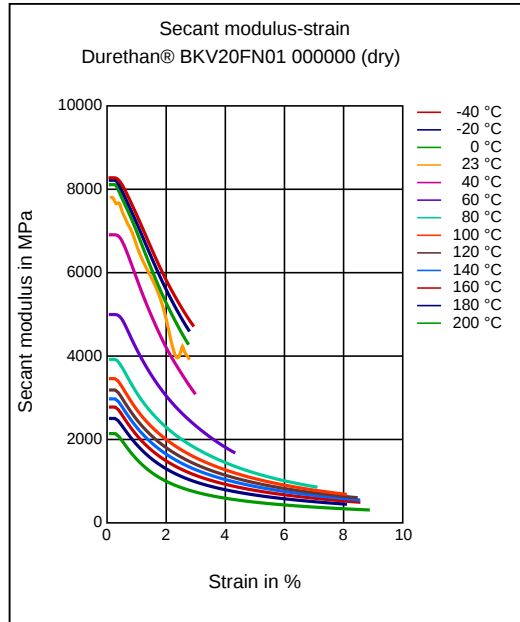
Stress-strain



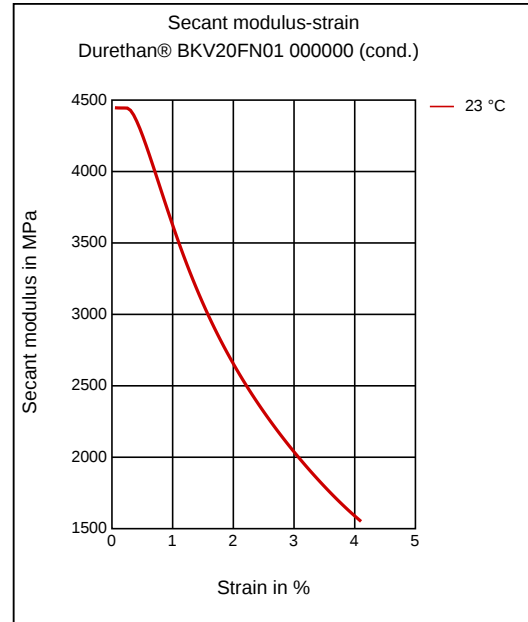
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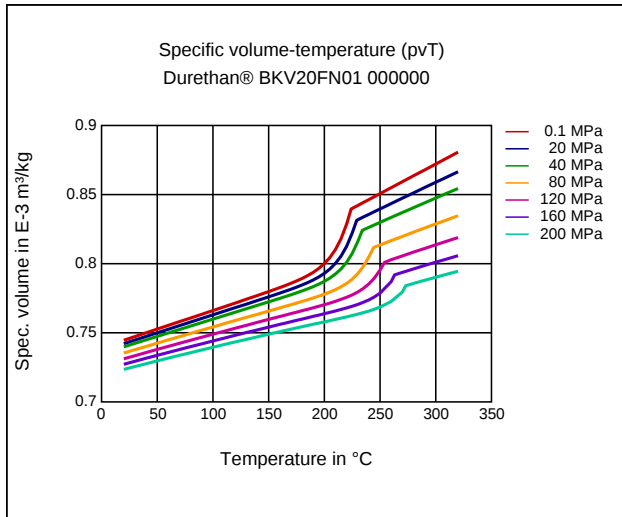
Secant modulus-strain



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