

Durethan® BKV130 000000
PA*-I-GF30

Envalior

Injection Molding, 30% Glass Reinforced, Improved Impact

ISO 1043 PA*-I-GF30

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.2 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6 / *	%	ISO 294-4, 2577
Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	9000 / 5200	MPa	ISO 527
Stress at Break	160 / 100	MPa	ISO 527
Strain at Break	4 / 7	%	ISO 527
Tensile Creep Modulus, 1h	* / 4200	MPa	ISO 899-1
Tensile Creep Modulus, 1000h	* / 3300	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	95 / 110	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	80 / 80	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	18 / 28	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	10 / 10	kJ/m ²	ISO 179/1eA
Puncture - maximum force, +23°C	1000 / 1400	N	ISO 6603-2
Puncture - maximum force, -30°C	800 / 900	N	ISO 6603-2
Puncture energy, +23°C	3.1 / 5.9	J	ISO 6603-2
Puncture energy, -30°C	1.9 / 2.1	J	ISO 6603-2
Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	213 / *	°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)	210 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	20 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	100 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB / *	class	UL 94
Thickness tested	1.5 / *	mm	-
Oxygen index	22 / *	%	ISO 4589-1/-2
Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.2 / 13	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.8 / 4.6	-	IEC 62631-2-1
Dissipation Factor, 100Hz	90 / 1750	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	200 / 900	E-4	IEC 62631-2-1
Volume Resistivity	1E13 / 1E10	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric Strength	40 / 40	kV/mm	IEC 60243-1
Comparative tracking index	575 / -	-	IEC 60112
Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	7 / *	%	Sim. to ISO 62
Humidity absorption	2 / *	%	Sim. to ISO 62
Density	1360 / -	kg/m ³	ISO 1183
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	134 / *	cm ³ /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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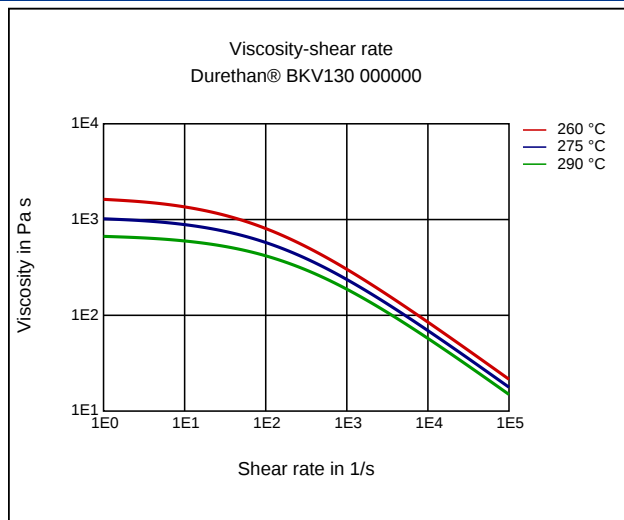
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Processing Recommendation Injection Molding

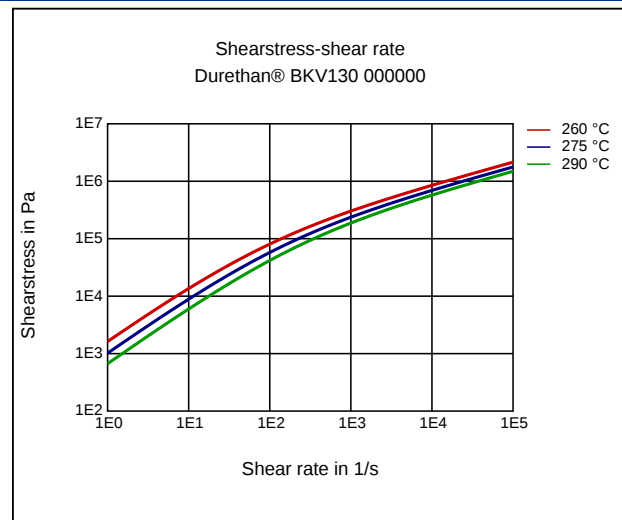
	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.12	%	-
Melt temperature	260 - 290	°C	-
Mold temperature	80 - 100	°C	-

Diagrams

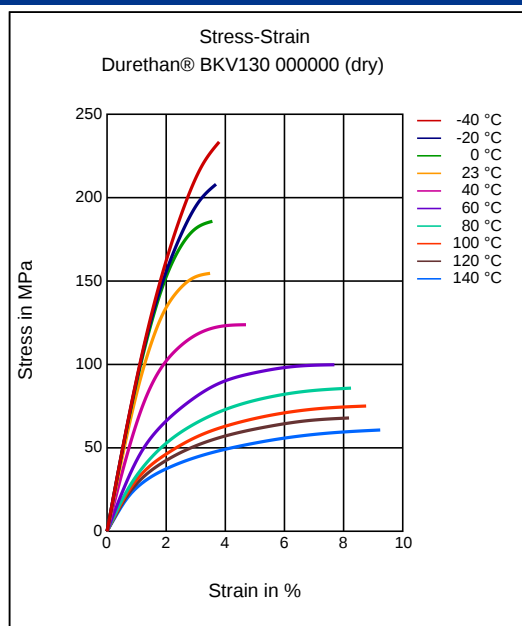
Viscosity-shear rate



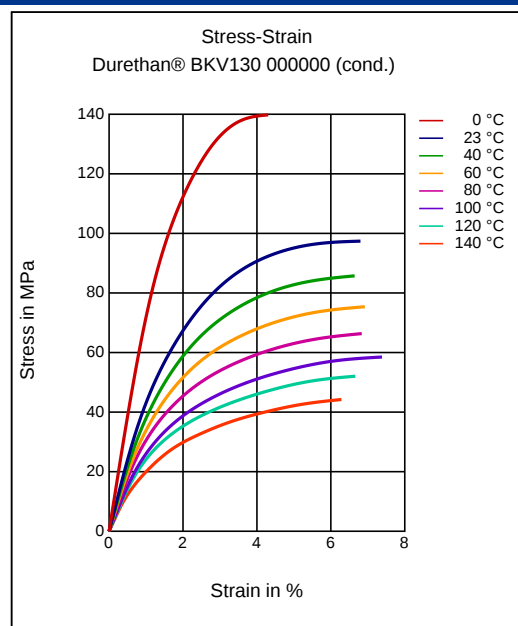
Shearstress-shear rate



Stress-strain



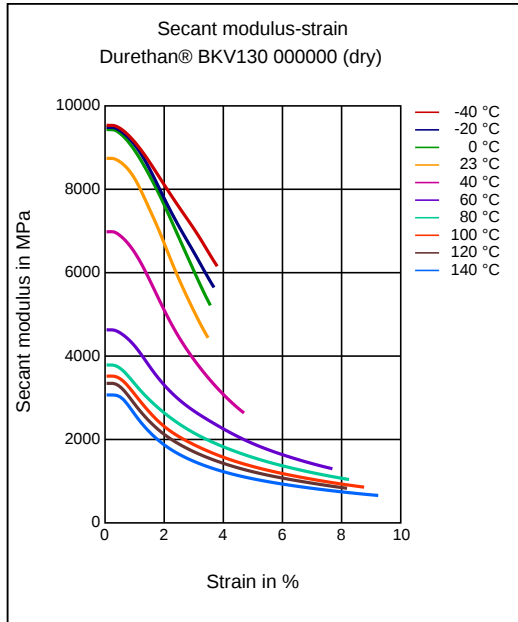
Stress-strain



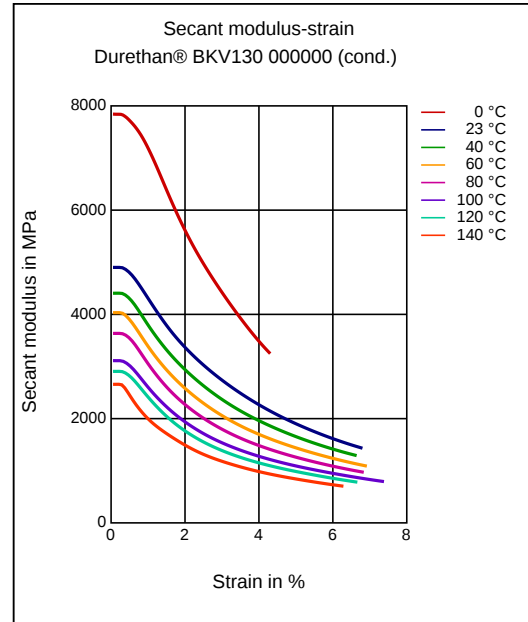
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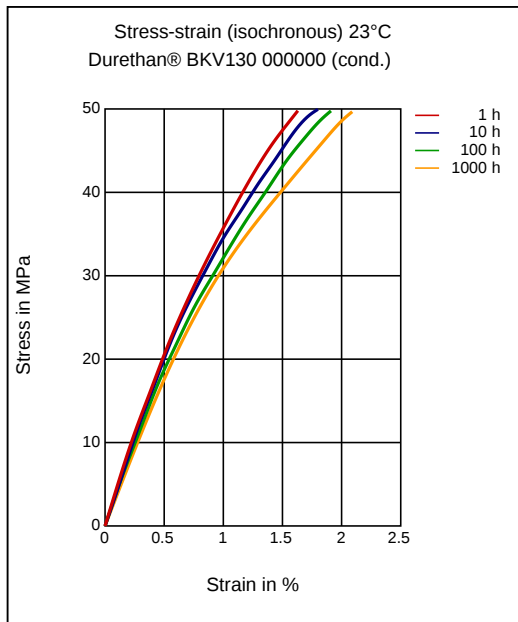
Secant modulus-strain



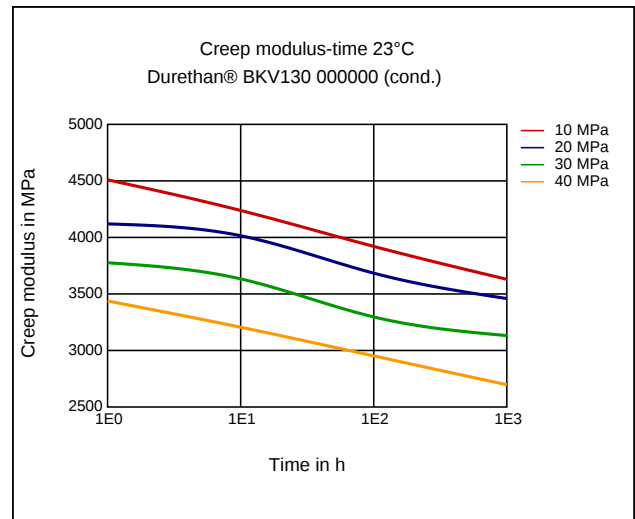
Secant modulus-strain



Stress-strain (isochronous) 23 °C



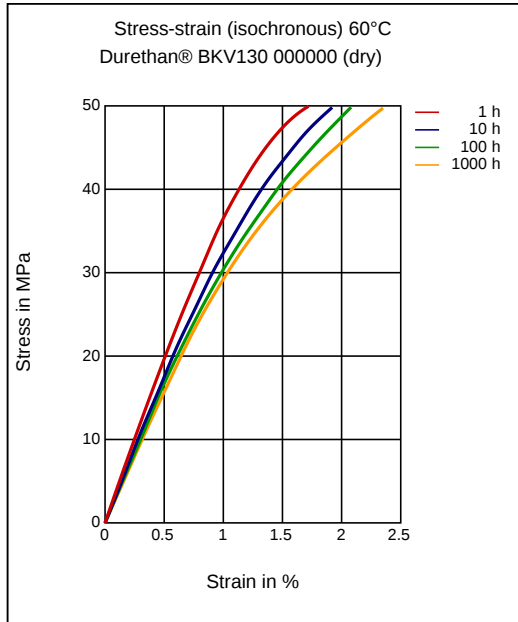
Creep modulus-time 23 °C



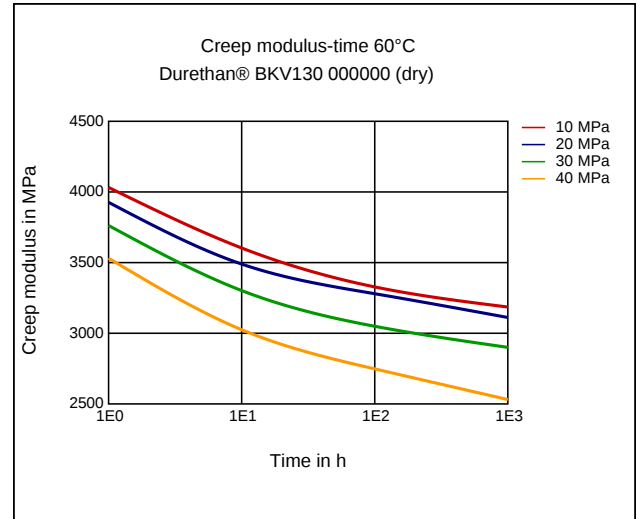
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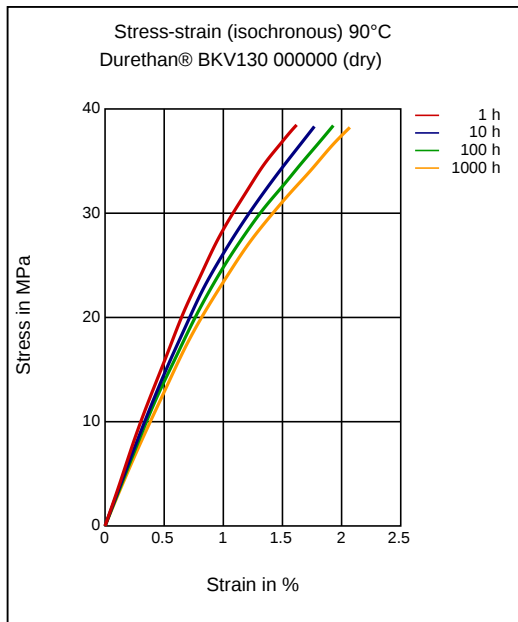
Stress-strain (isochronous) 60°C



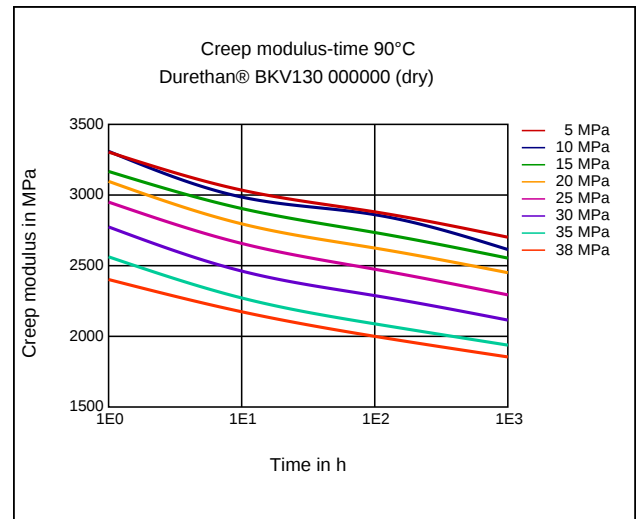
Creep modulus-time 60°C



Stress-strain (isochronous) 90°C



Creep modulus-time 90°C

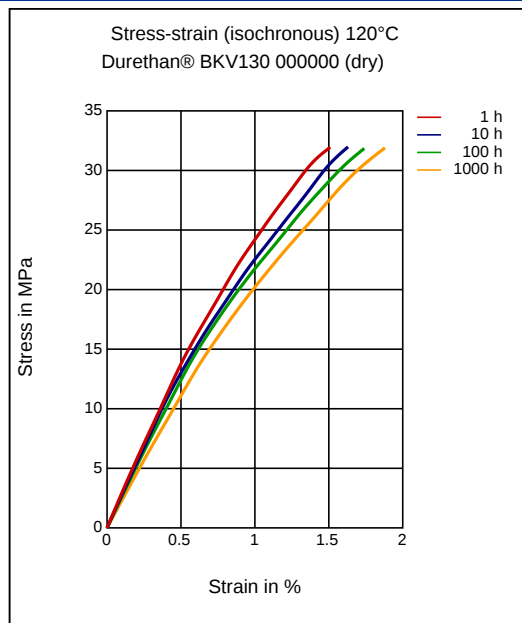


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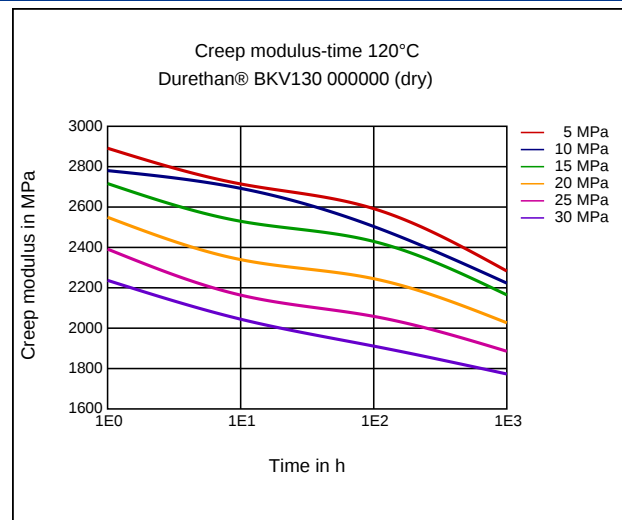
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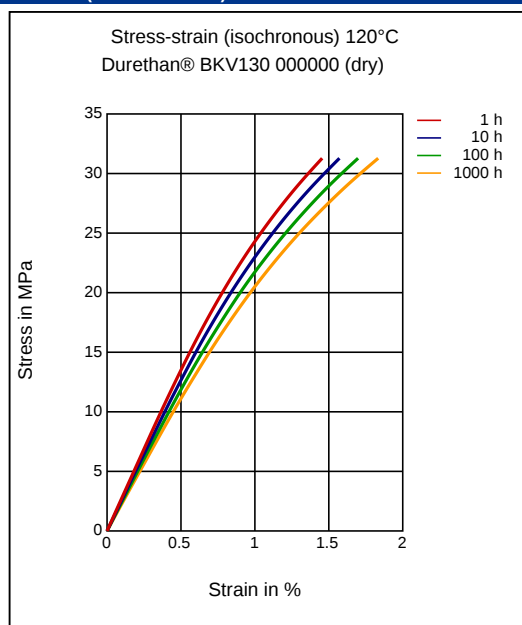
Stress-strain (isochronous) 120°C



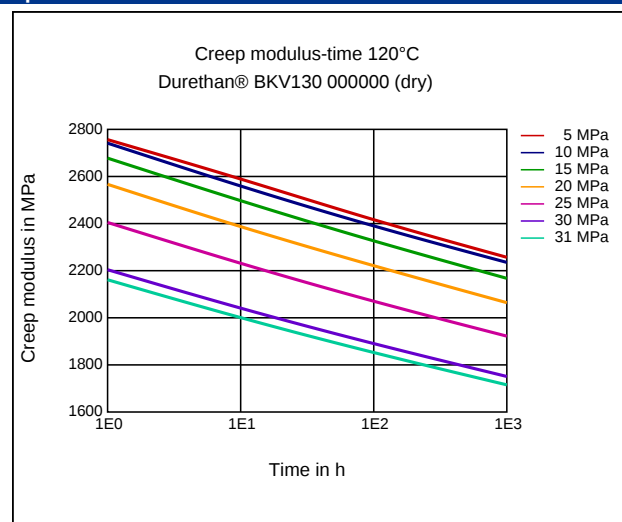
Creep modulus-time 120°C



Stress-strain (isochronous) 120°C



Creep modulus-time 120°C



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Additives

Release agent

Special Characteristics

Impact modified

Injection Molding

PREPROCESSING

Residual moisture content: 0.03 - 0.12%

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Drying temperature dry air dryer: 80 °C

Drying time dry air dryer 2 - 6 h

PROCESSING

Melt temperature (Tmin - Tmax): 260 - 290 °C

Mold temperature: 80 - 100 °C
