

Durethan® BKV45FN04 000000
PA6-GF45 FR(40)

Envalior

Injection Molding, 45% Glass Reinforced, Flame Retardant (halogen free), Heat Stabilized, Improved flow

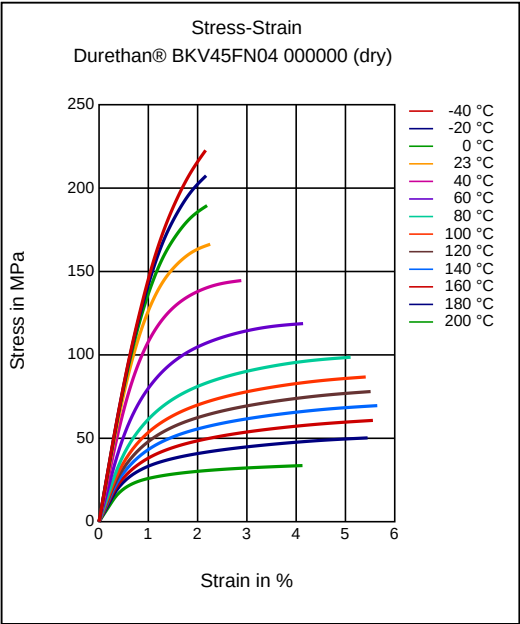
ISO 1043 PA6-GF45 FR(40)

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			
ISO Data			
Tensile Modulus	15800 / 10300	MPa	ISO 527
Stress at Break	160 / 115	MPa	ISO 527
Strain at Break	2.2 / 4.4	%	ISO 527
Impact Strength (Charpy), +23°C	55 / 60	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	50 / 50	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	- / 13	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	- / 10	kJ/m ²	ISO 179/1eA
Puncture - maximum force, +23°C	910 / 990	N	ISO 6603-2
Puncture energy, +23°C	3.9 / 5	J	ISO 6603-2
Flexural Modulus (23°C)	15000 / 11300	MPa	ISO 178
Notched Impact Strength (Izod)	10 / 13	kJ/m ²	ISO 180/1A
Temperature	-30	°C	-
Impact Strength (Izod), 23°C	50 / 55	kJ/m ²	ISO 180/1U
Thermal Properties			
ISO Data			
Melting Temperature (10°C/min)	220 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	210 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	220 / *	°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	70 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	V-0 / *	class	UL 94
Burning Behav. at thickness h	V-0 / *	class	UL 94
Burning Behav. 5V at Thickness h	5VA / *	class	IEC 60695-11-20
Thickness tested	1.0 / *	mm	-
Oxygen index	34 / *	%	ISO 4589-1/-2
Electrical Properties			
ISO Data			
Relative permittivity, 100Hz	4.3 / 8.2	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.9 / 4.2	-	IEC 62631-2-1
Dissipation Factor, 100Hz	145 / 970	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	150 / 630	E-4	IEC 62631-2-1
Volume Resistivity	>1E13 / 4.8E10	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1.8E14	Ohm	IEC 62631-3-2
Electric Strength	40 / 36	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112
Other Properties			
ISO Data			
Water Absorption	3.5 / *	%	Sim. to ISO 62
Humidity absorption	1.1 / *	%	Sim. to ISO 62
Density	1570 / -	kg/m ³	ISO 1183
Test specimen production			
ISO Data			
Injection Molding, melt temperature	260	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

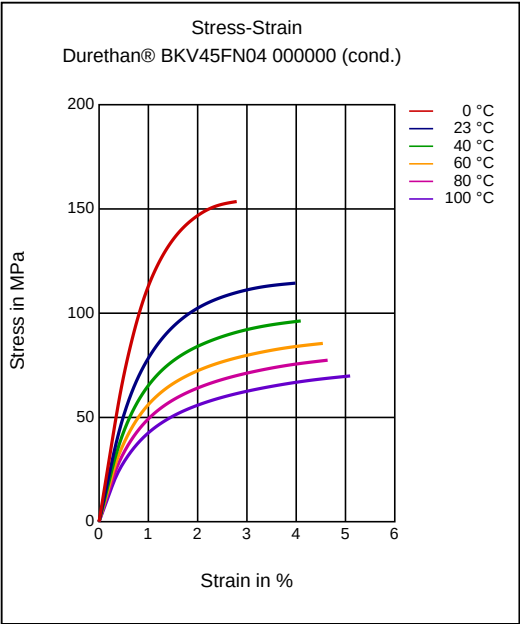
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4 - 6	h	-
Processing humidity	≤0.07	%	-
Melt temperature	250 - 280	°C	-
Mold temperature	70 - 90	°C	-

Diagrams

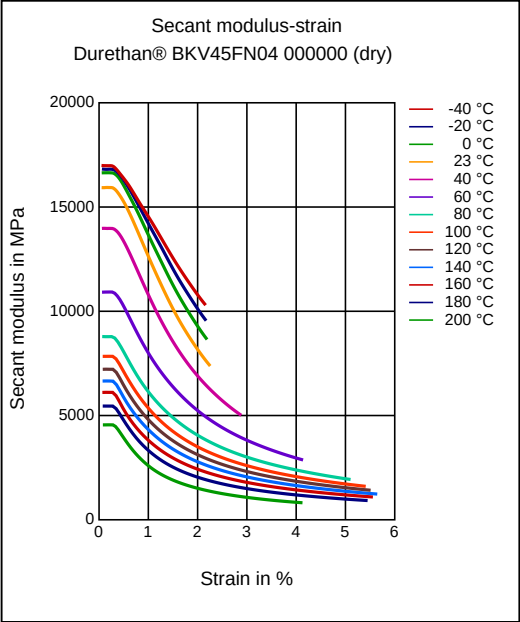
Stress-strain



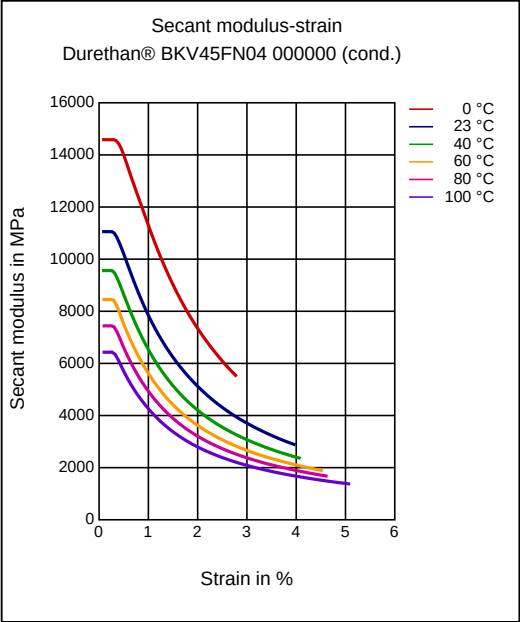
Stress-strain



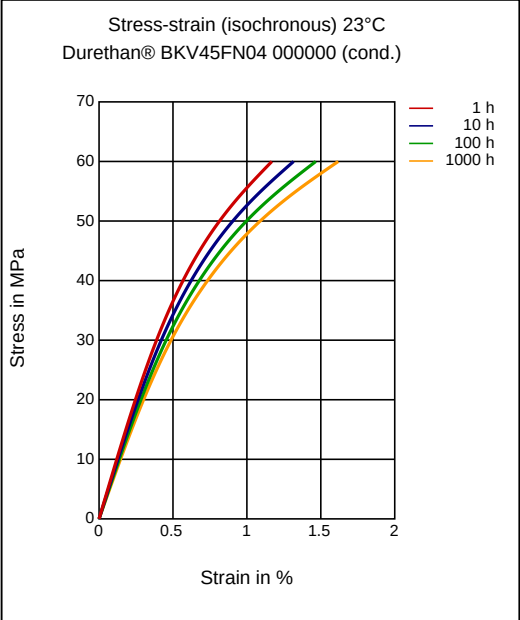
Secant modulus-strain



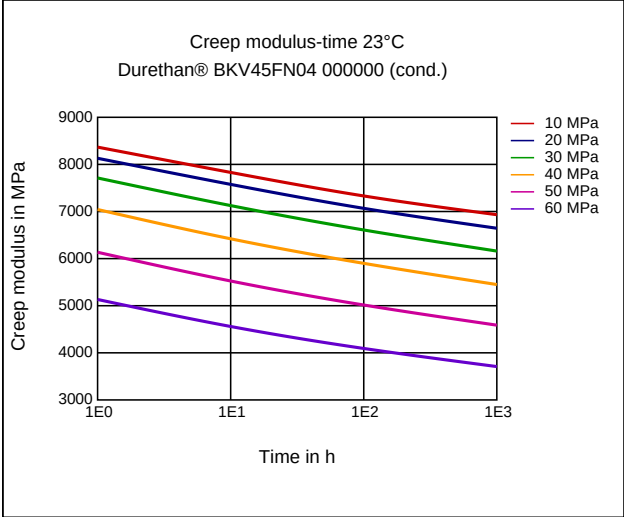
Secant modulus-strain



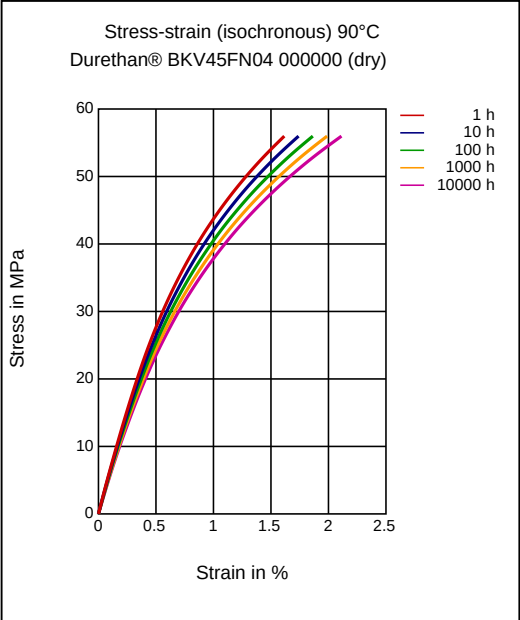
Stress-strain (isochronous) 23°C



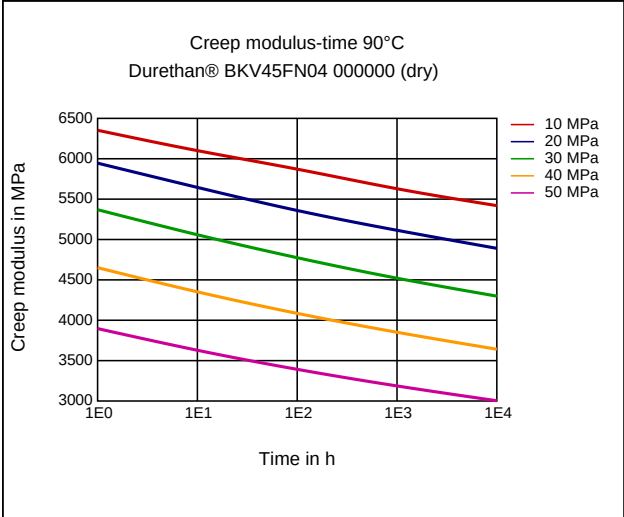
Creep modulus-time 23°C



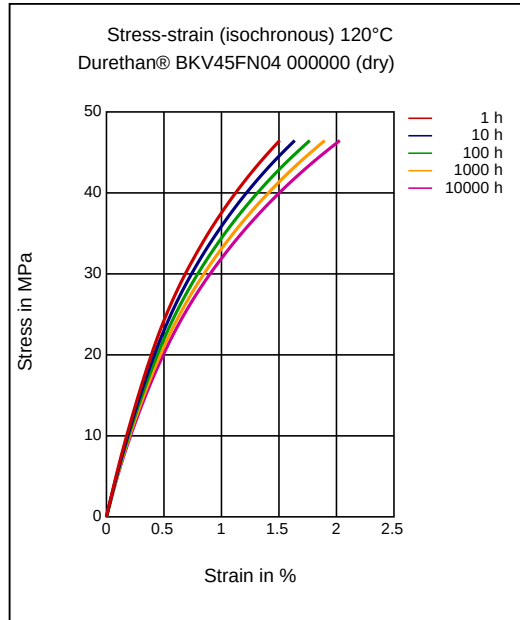
Stress-strain (isochronous) 90°C



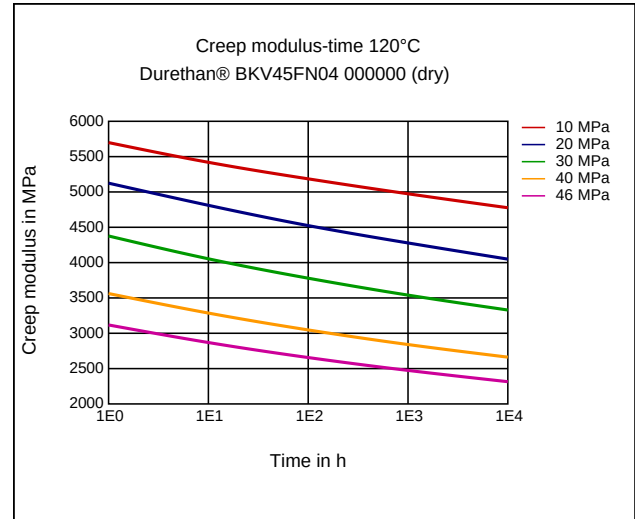
Creep modulus-time 90°C



Stress-strain (isochronous) 120 °C



Creep modulus-time 120 °C



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Special Characteristics

Flame retardant, Halogen-free, Heat aging stabilized

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 - 280 °C

Mold temperature: 70 - 90 °C

Disclaimer

Liability Exclusion

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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