Durethan® BKV50H2.0EF 900116

PA6-GF50 Envalior

Injection Molding, 50% Glass Reinforced, Heat Stabilized, Improved flow

ISO 1043 PA6-GF50

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	16200 / 10000	MPa	ISO 527
Stress at Break	215 / 140	MPa	ISO 527
Strain at Break	2.7 / 3.5	%	ISO 527
Impact Strength (Charpy), +23°C	100 / 85	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	95 / 85	kJ/m²	ISO 179/1eU
Puncture - maximum force, +23°C	1180 / -	N	ISO 6603-2
Puncture - maximum force, -30°C	1000 / -	N	ISO 6603-2
Puncture energy, +23°C	4.3 / -	J	ISO 6603-2
Puncture energy, -30°C	3.4 / -	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)	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	12 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	90 / *	E-6/K	ISO 11359-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.7 / 12.9	-	IEC 62631-2-1
Relative permittivity, 1MHz	4.2 / 4.8	-	IEC 62631-2-1
Dissipation Factor, 100Hz	135 / 2620	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	170 / 774	E-4	IEC 62631-2-1
Volume Resistivity	7E12 / 4E9	Ohm*m	IEC 62631-3-1
Electric Strength	35 / 34	kV/mm	IEC 60243-1
Comparative tracking index	400 / -	-	IEC 60112

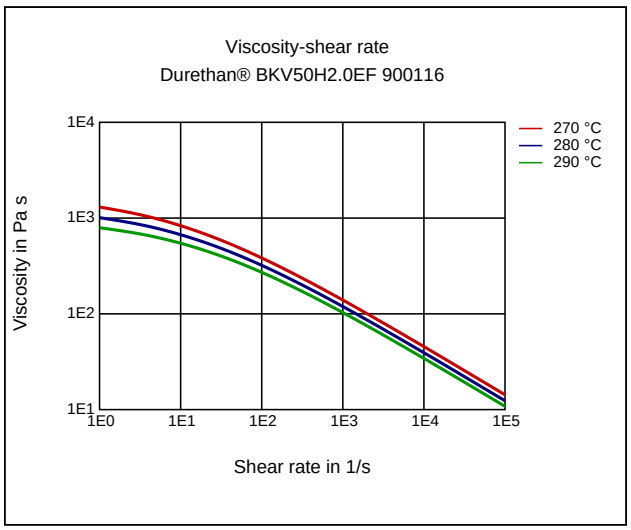
Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	5 / *	%	Sim. to ISO 62
Humidity absorption	1.5 / *	%	Sim. to ISO 62
Density	1570 / -	kg/m³	ISO 1183

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

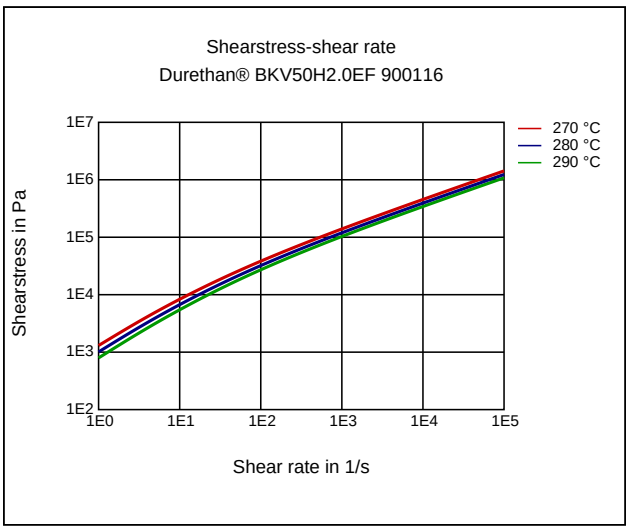
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.12	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	80 - 120	°C	-

Diagrams

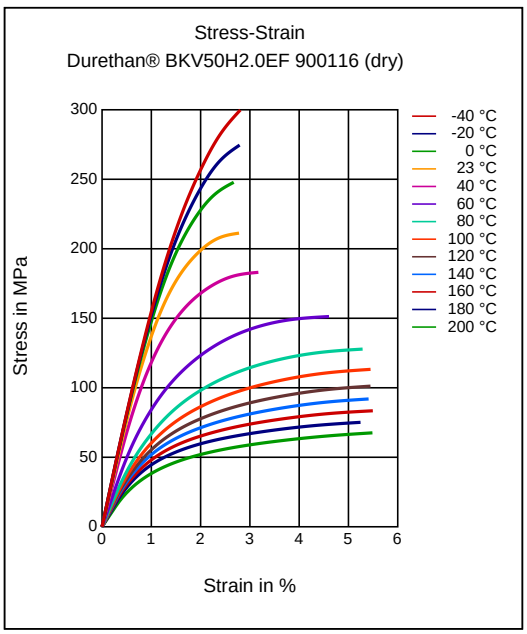
Viscosity-shear rate



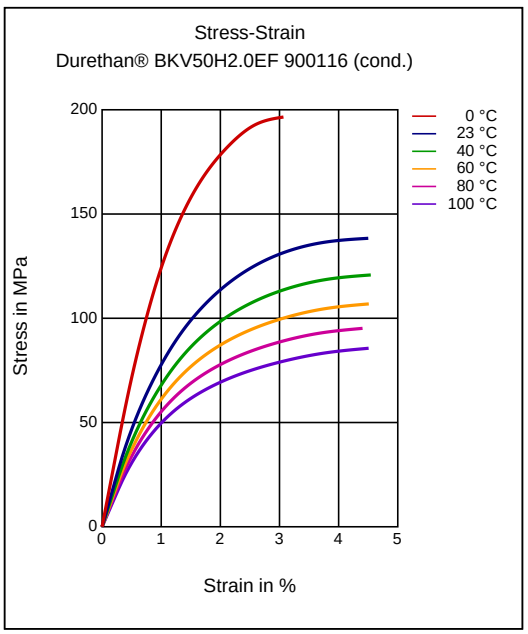
Shearstress-shear rate



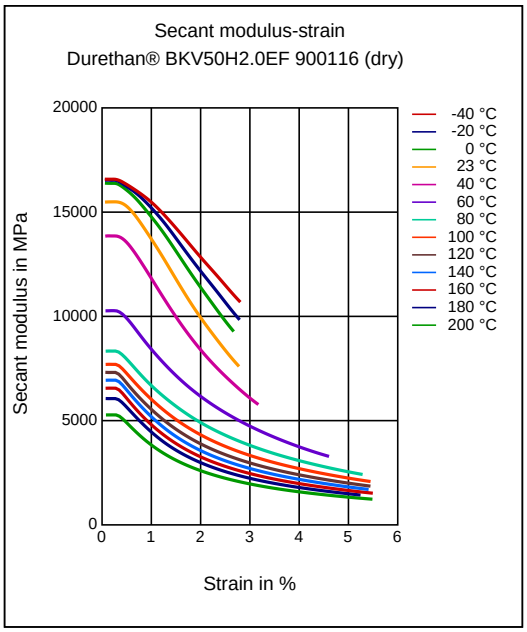
Stress-strain



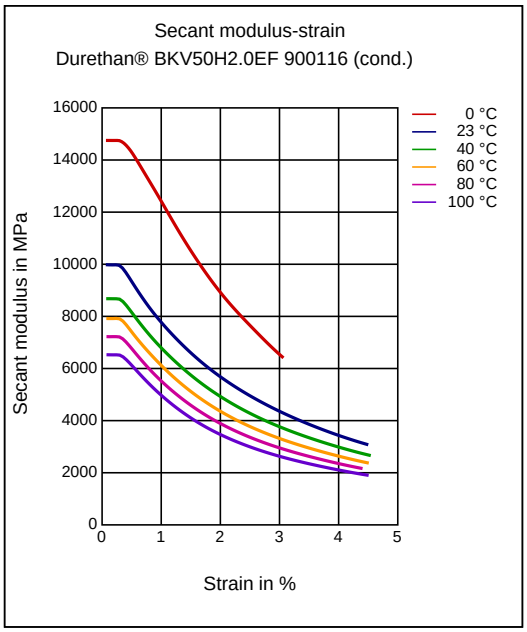
Stress-strain



Secant modulus-strain



Secant modulus-strain



Characteristics

Processing
Injection Molding

Additives
Release agent

Delivery form
Pellets

Special Characteristics
Heat aging stabilized

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

Disclaimer

- any bodily implant application for greater than 30 days
- any critical component in any medical device that supports or sustains human life.

At all times, our standard terms and conditions of sale apply.