

Durethan® AKV40H2.0 901510 PA66-GF40

Envalior

Injection Molding, 40% Glass Reinforced, Heat Stabilized

ISO 1043 PA66-GF40

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / *	%	ISO 294-4, 2577
Mechanical Properties			
ISO Data			
Tensile Modulus	13000 / 8800	MPa	ISO 527
Stress at Break	210 / 145	MPa	ISO 527
Strain at Break	3 / 5	%	ISO 527
Tensile Creep Modulus, 1h	* / 7700	MPa	ISO 899-1
Tensile Creep Modulus, 1000h	* / 6800	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	90 / 100	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	80 / 90	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	15 / 23	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	10 / 12	kJ/m ²	ISO 179/1eA
Thermal Properties			
ISO Data			
Melting Temperature (10°C/min)	263 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	250 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	250 / *	°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	90 / *	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	26 / *	%	ISO 4589-1/-2
Electrical Properties			
ISO Data			
Relative permittivity, 100Hz	4 / 10	-	IEC 62631-2-1
Relative permittivity, 1MHz	4 / 4.5	-	IEC 62631-2-1
Dissipation Factor, 100Hz	110 / 2350	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	150 / 650	E-4	IEC 62631-2-1
Volume Resistivity	>1E13 / 1E12	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric Strength	40 / 35	kV/mm	IEC 60243-1
Comparative tracking index	525 / -	-	IEC 60112
Other Properties			
ISO Data			
Water Absorption	4.5 / *	%	Sim. to ISO 62
Humidity absorption	1.7 / *	%	Sim. to ISO 62
Density	1460 / -	kg/m ³	ISO 1183
Material Specific Properties			
ISO Data			
Viscosity number	146 / *	cm ³ /g	ISO 307, 1157, 1628
Test specimen production			
ISO Data			
Injection Molding, melt temperature	290	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294
Processing Recommendation Injection Molding			
Pre-drying - Temperature	80	°C	-

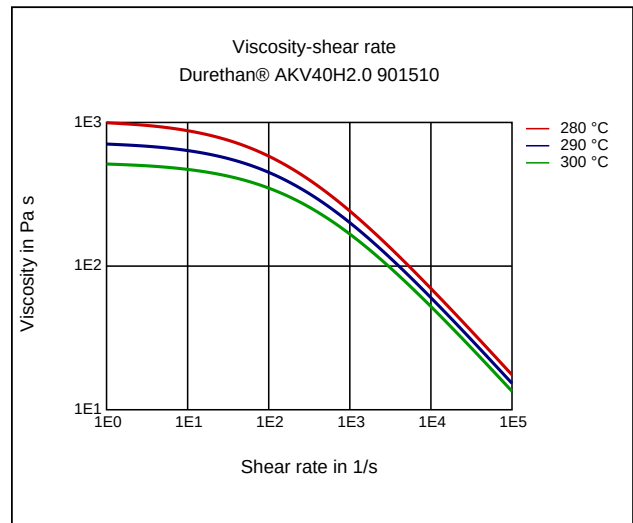
Durethan® AKV40H2.0 901510
PA66-GF40

Envalior

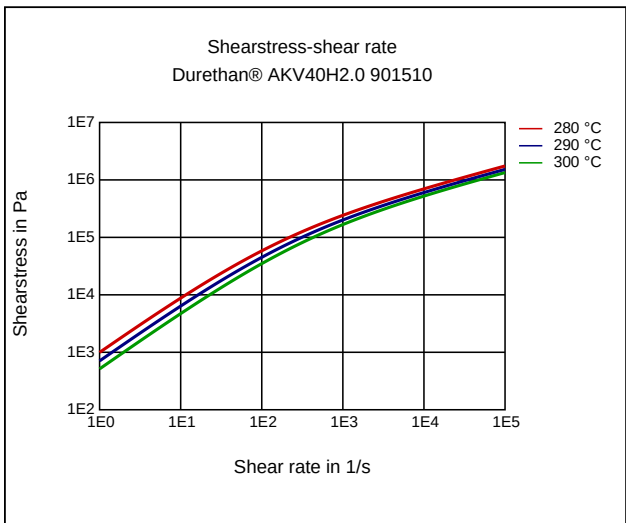
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.12	%	-
Melt temperature	280 - 300	°C	-
Mold temperature	80 - 120	°C	-

Diagrams

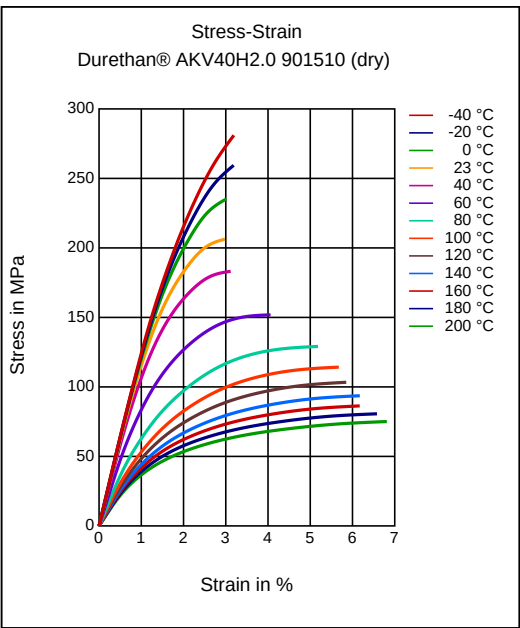
Viscosity-shear rate



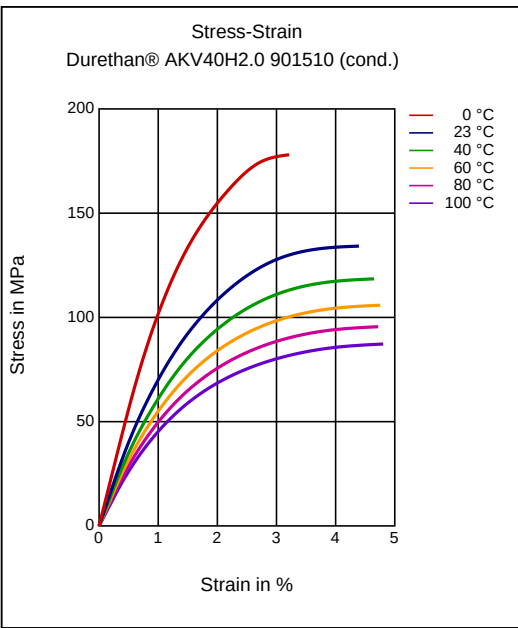
Shearstress-shear rate



Stress-strain



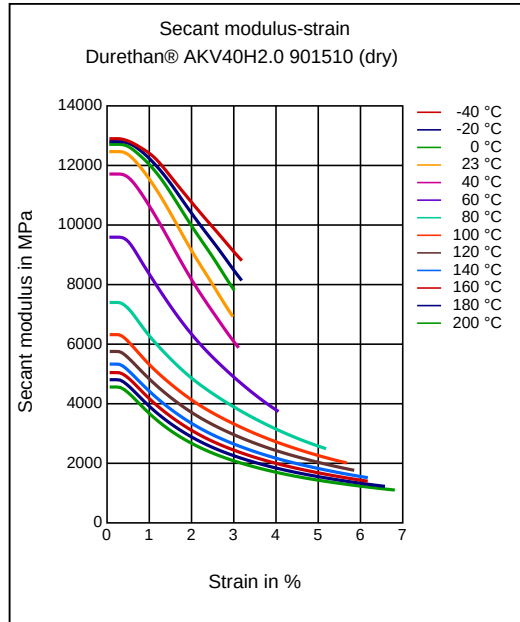
Stress-strain



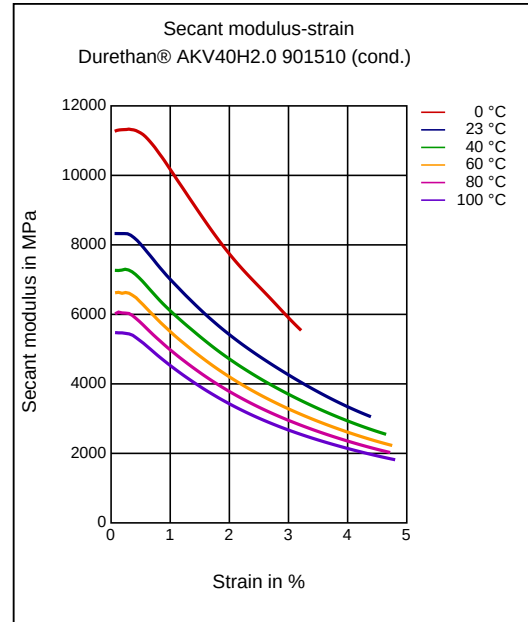
Durethan® AKV40H2.0 901510
PA66-GF40

Envalior

Secant modulus-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding

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): 280 - 300 °C

Mold temperature: 80 - 120 °C