

Durethan® BM240H2.0 901510
PA6-MX40

Envalior

Injection Molding, 40% Mineral Reinforced, Heat Stabilized, Low Warpage

ISO 1043 PA6-MX40

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	6000 / 2200	MPa	ISO 527
Stress at Break	85 / 50	MPa	ISO 527
Strain at Break	7 / 40	%	ISO 527
Impact Strength (Charpy), +23°C	120 / no break	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	90 / 90	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	- / 12	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	- / 10	kJ/m ²	ISO 179/1eA
Puncture - maximum force, +23°C	3050 / -	N	ISO 6603-2
Puncture - maximum force, -30°C	825 / -	N	ISO 6603-2
Puncture energy, +23°C	9.2 / -	J	ISO 6603-2
Puncture energy, -30°C	1.6 / -	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)	90 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	190 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	60 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	70 / *	E-6/K	ISO 11359-1/-2
Oxygen index	26 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.4 / 15	-	IEC 62631-2-1
Relative permittivity, 1MHz	4 / 4.7	-	IEC 62631-2-1
Dissipation Factor, 100Hz	110 / 2500	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	150 / 1000	E-4	IEC 62631-2-1
Volume Resistivity	1E13 / 1E9	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric Strength	35 / 38	kV/mm	IEC 60243-1
Comparative tracking index	525 / -	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	6 / *	%	Sim. to ISO 62
Humidity absorption	1.9 / *	%	Sim. to ISO 62
Density	1460 / -	kg/m ³	ISO 1183

Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	142 / *	cm ³ /g	ISO 307, 1157, 1628

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	290	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

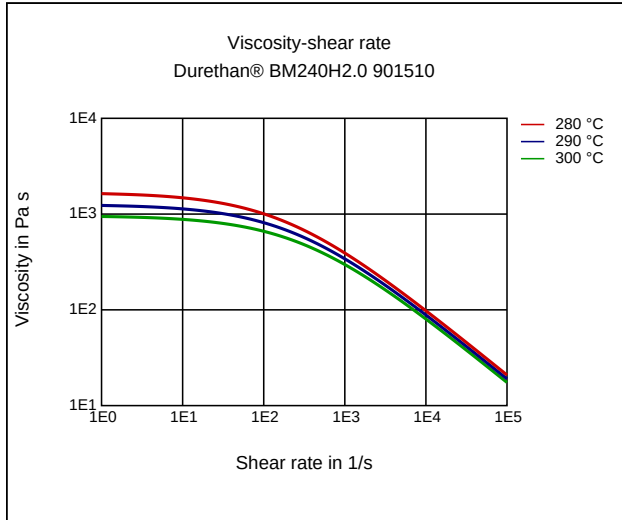
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.12	%	-
Melt temperature	280 - 300	°C	-
Mold temperature	80 - 120	°C	-

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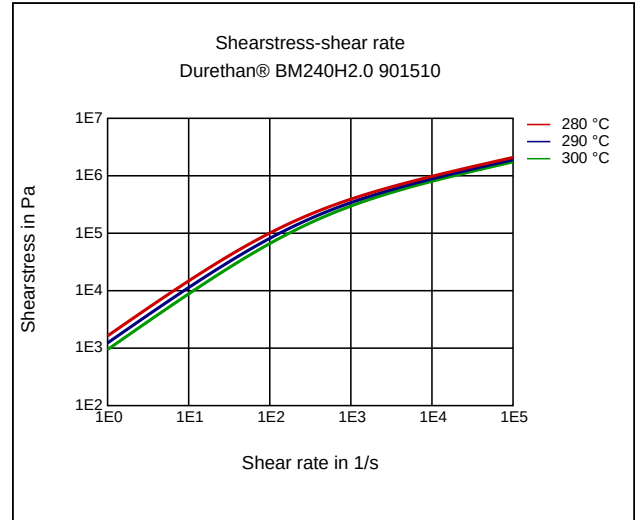
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Diagrams

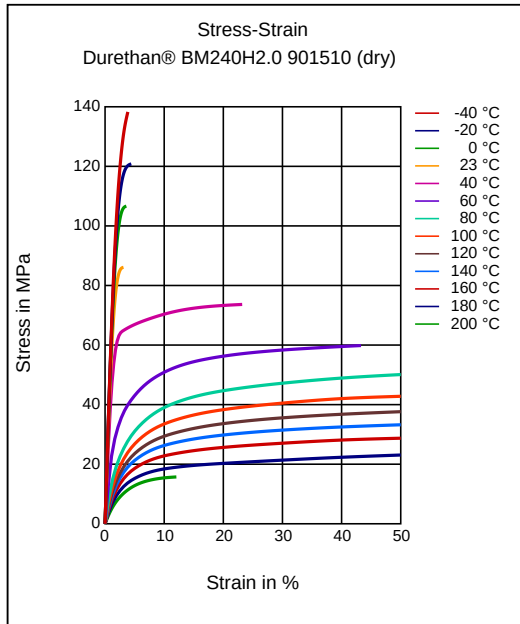
Viscosity-shear rate



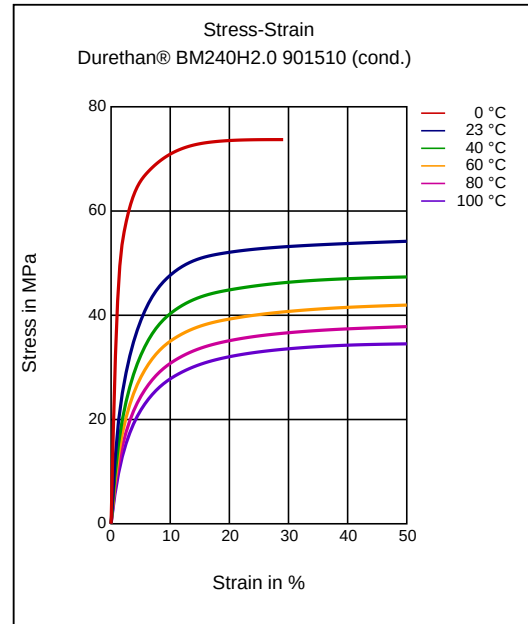
Shearstress-shear rate



Stress-strain



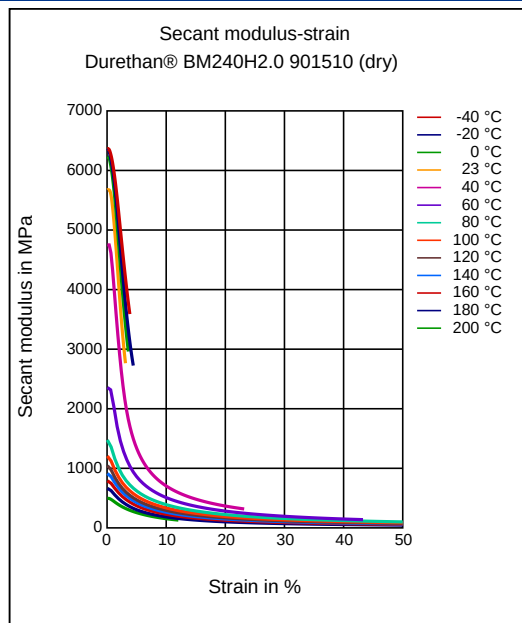
Stress-strain



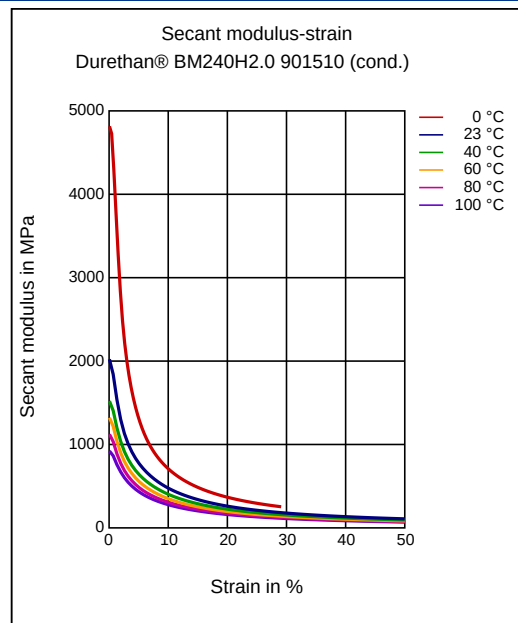
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Secant modulus-strain



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Characteristics

Processing

Injection Molding

Delivery form

Pellets

Additives

Release agent

Special Characteristics

Heat aging stabilized

Features

Low Warpage

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