

Durethan® BM230H2.0 901510
PA6-MX30

Envalior

Injection Molding, 30% Mineral Reinforced, Heat Stabilized, Low Warpage

ISO 1043 PA6-MX30

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	5000 / 2000	MPa	ISO 527
Stress at Break	80 / 50	MPa	ISO 527
Strain at Break	10 / 45	%	ISO 527
Impact Strength (Charpy), +23°C	120 / no break	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	- / 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	4690 / -	N	ISO 6603-2
Puncture - maximum force, -30°C	1130 / -	N	ISO 6603-2
Puncture energy, +23°C	19.1 / -	J	ISO 6603-2
Puncture energy, -30°C	4.2 / -	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)	70 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	185 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	70 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	90 / *	E-6/K	ISO 11359-1/-2
Oxygen index	25 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.3 / 16	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.9 / 4.7	-	IEC 62631-2-1
Dissipation Factor, 100Hz	80 / 3250	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	180 / 1100	E-4	IEC 62631-2-1
Volume Resistivity	1E12 / 1E10	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric Strength	29 / 27	kV/mm	IEC 60243-1
Comparative tracking index	525 / -	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	7 / *	%	Sim. to ISO 62
Humidity absorption	2.2 / *	%	Sim. to ISO 62
Density	1360 / -	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	280	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

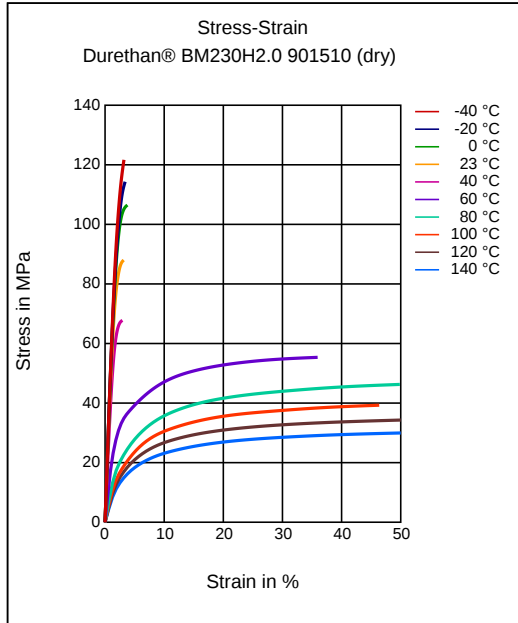
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.12	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	80 - 120	°C	-

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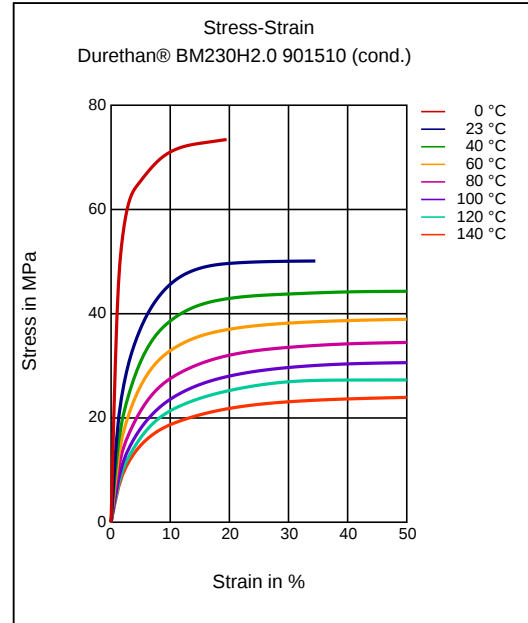
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Diagrams

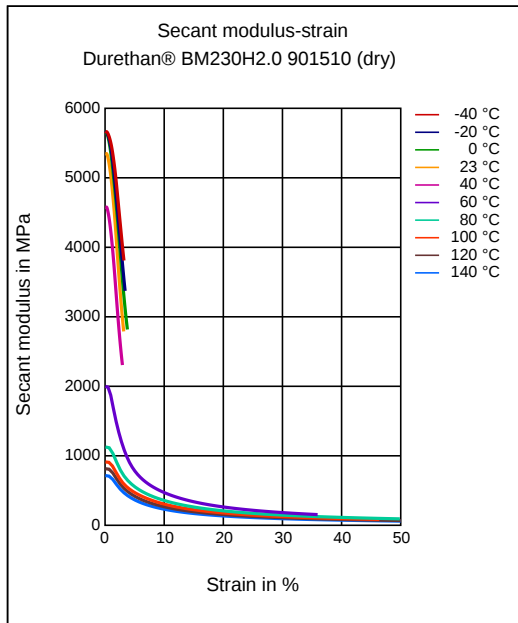
Stress-strain



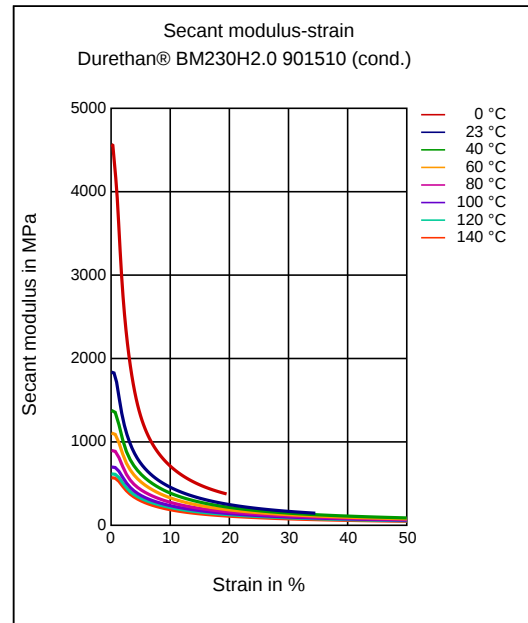
Stress-strain



Secant modulus-strain



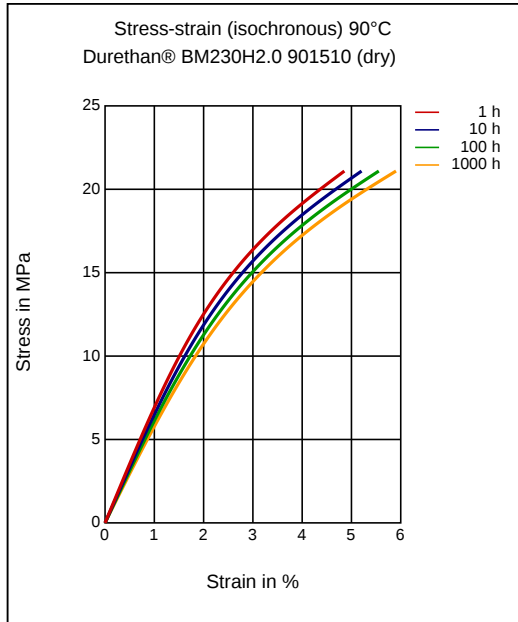
Secant modulus-strain



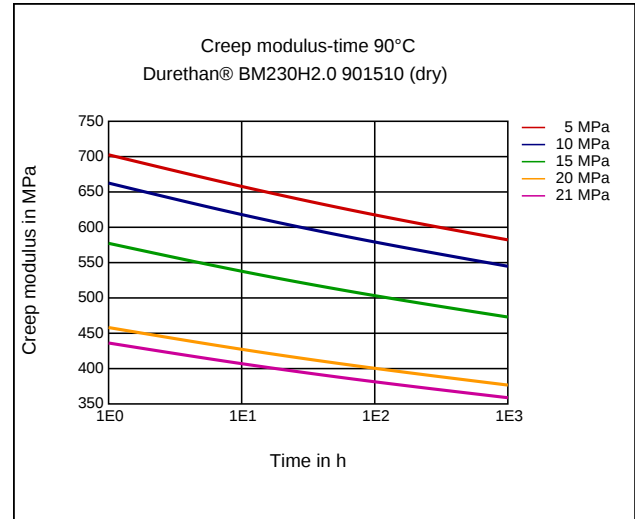
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Stress-strain (isochronous) 90 °C



Creep modulus-time 90 °C



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): 270 - 290 °C

Mold temperature: 80 - 120 °C