

Durethan® B30S
PA6

Envalior

Injection Molding, Unreinforced

ISO 1043 PA6

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	3000 / 1000	MPa	ISO 527
Yield stress	80 / 40	MPa	ISO 527
Yield strain	4 / 20	%	ISO 527
Nominal strain at break	20 / >50	%	ISO 527
Tensile Creep Modulus, 1h	* / 800	MPa	ISO 899-1
Tensile Creep Modulus, 1000h	* / 600	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	no break / no break	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	no break / no break	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	- / 20	kJ/m²	ISO 179/1eA
Puncture - maximum force, +23°C	5900 / -	N	ISO 6603-2
Puncture - maximum force, -30°C	7300 / -	N	ISO 6603-2
Puncture energy, +23°C	90 / -	J	ISO 6603-2
Puncture energy, -30°C	85 / -	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)	60 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	160 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	100 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	110 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	V-2 / *	class	UL 94
Thickness tested	1.5 / *	mm	-
UL recognition	yes / *	-	-
Burning Behav. at thickness h	V-2 / *	class	UL 94
Thickness tested	3.0 / *	mm	-
UL recognition	yes / *	-	-
Oxygen index	26 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4 / 15	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.5 / 4	-	IEC 62631-2-1
Dissipation Factor, 100Hz	170 / 2000	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	200 / 1200	E-4	IEC 62631-2-1
Volume Resistivity	1E13 / 1E10	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric Strength	30 / 30	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	10 / *	%	Sim. to ISO 62
Humidity absorption	3 / *	%	Sim. to ISO 62
Density	1140 / -	kg/m³	ISO 1183

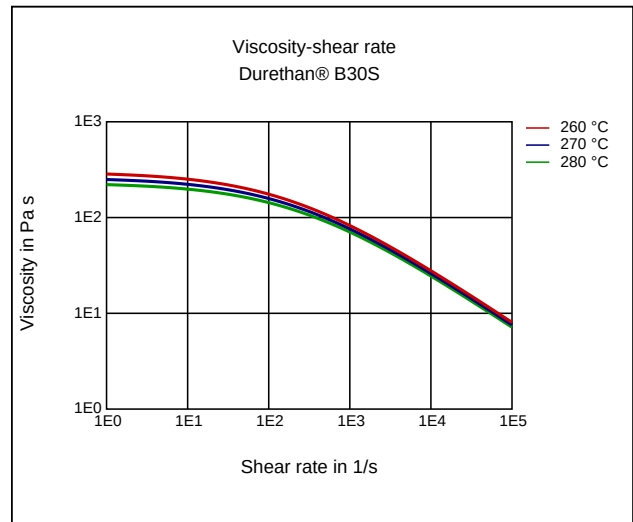
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	134 / *	cm³/g	ISO 307, 1157, 1628

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	270	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

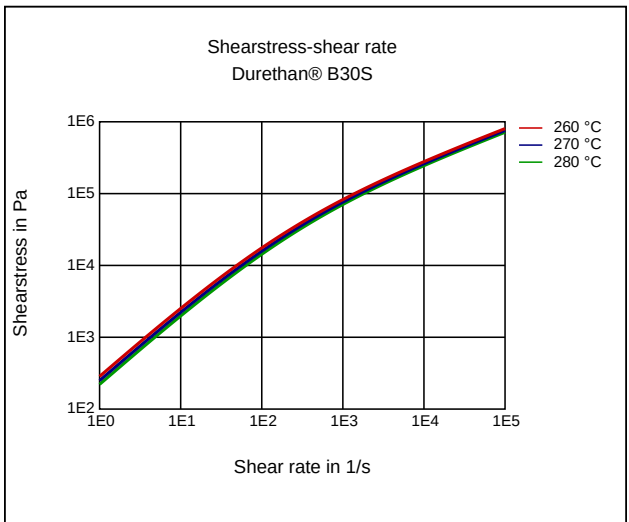
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 6	h	-
Processing humidity	≤0.12	%	-
Melt temperature	260 - 280	°C	-
Mold temperature	80 - 100	°C	-

Diagrams

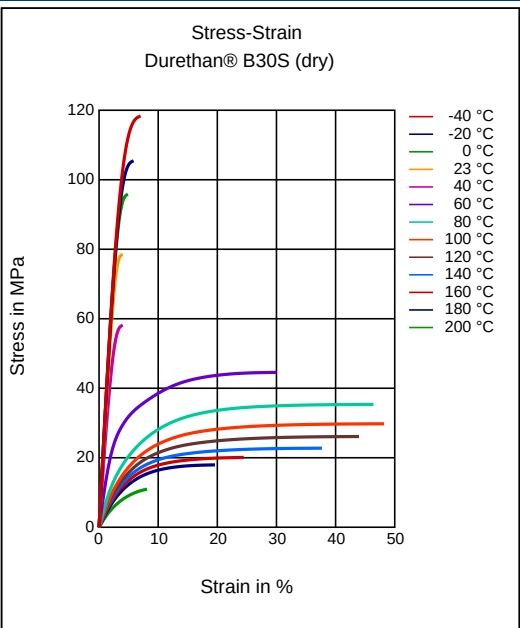
Viscosity-shear rate



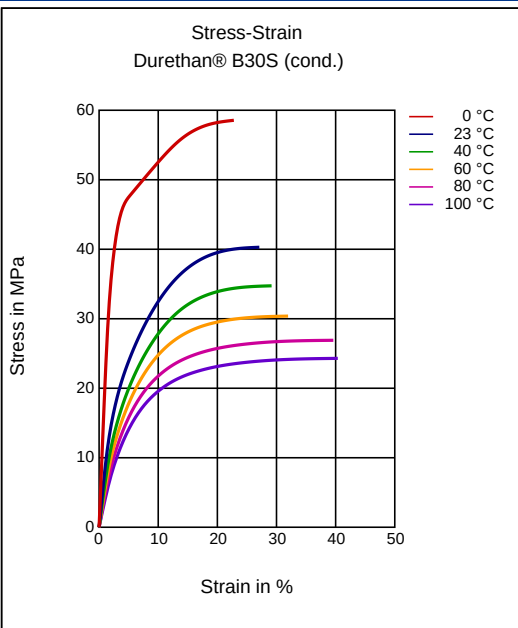
Shearstress-shear rate



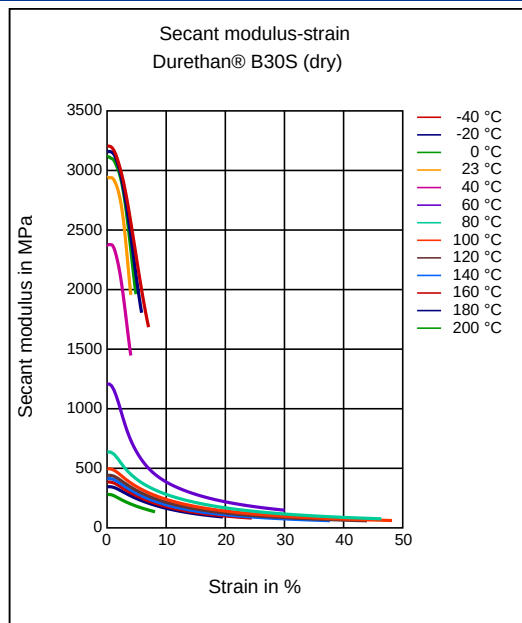
Stress-strain



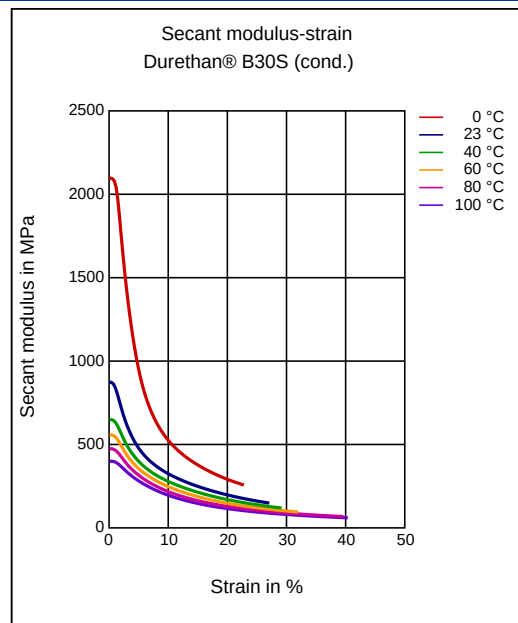
Stress-strain



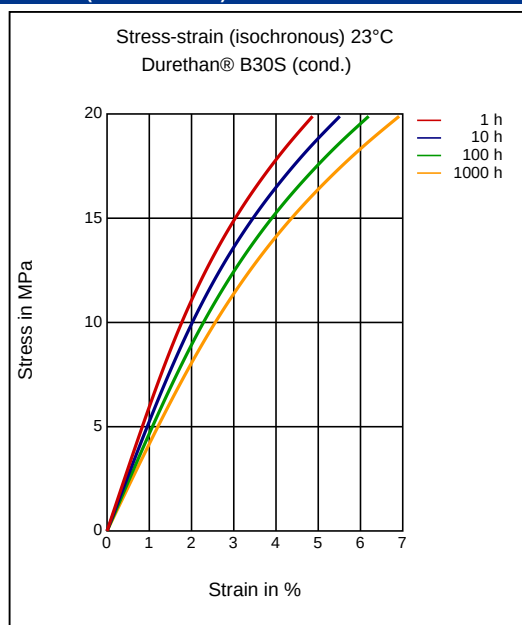
Secant modulus-strain



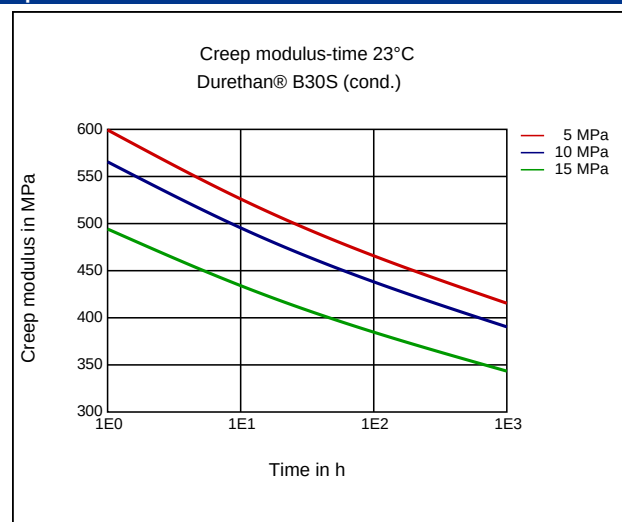
Secant modulus-strain



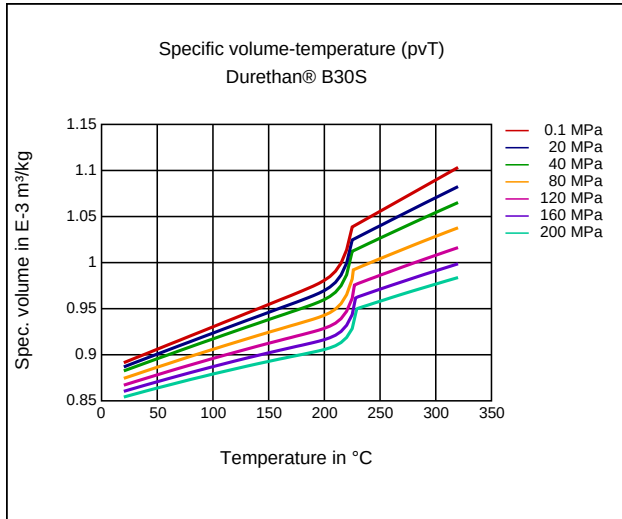
Stress-strain (isochronous) 23 °C



Creep modulus-time 23 °C



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Delivery form

Pellets

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): 260 - 280 °C

Mold temperature: 80 - 100 °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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