

Durethan® BC30 000000
PA6-I

Envalior

Injection Molding, Unreinforced, Improved Impact

ISO 1043 PA6-I

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	36 / *	cm³/10min	ISO 1133
Temperature	270 / *	°C	-
Load	2.16 / *	kg	-
Molding shrinkage, parallel	1.6 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.8 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	2800 / 1200	MPa	ISO 527
Yield stress	65 / 40	MPa	ISO 527
Yield strain	4 / 20	%	ISO 527
Nominal strain at break	- / >50	%	ISO 527
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	10 / 50	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	- / 10	kJ/m²	ISO 179/1eA
Puncture - maximum force, +23°C	4340 / 470	N	ISO 6603-2
Puncture - maximum force, -30°C	5870 / 940	N	ISO 6603-2
Puncture energy, +23°C	55 / 140	J	ISO 6603-2
Puncture energy, -30°C	65 / 20	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)	55 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	145 / *	°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	135 / *	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	22 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.7 / 8.5	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.3 / 3.8	-	IEC 62631-2-1
Dissipation Factor, 100Hz	110 / 1650	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	190 / 660	E-4	IEC 62631-2-1
Volume Resistivity	1E13 / 1E11	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric Strength	35 / 35	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112

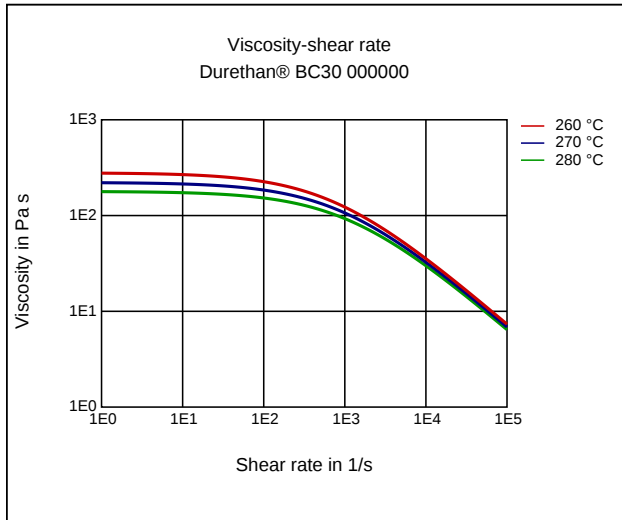
Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	9 / *	%	Sim. to ISO 62
Humidity absorption	2.7 / *	%	Sim. to ISO 62
Density	1100 / -	kg/m³	ISO 1183

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 - 90	°C	-

Diagrams

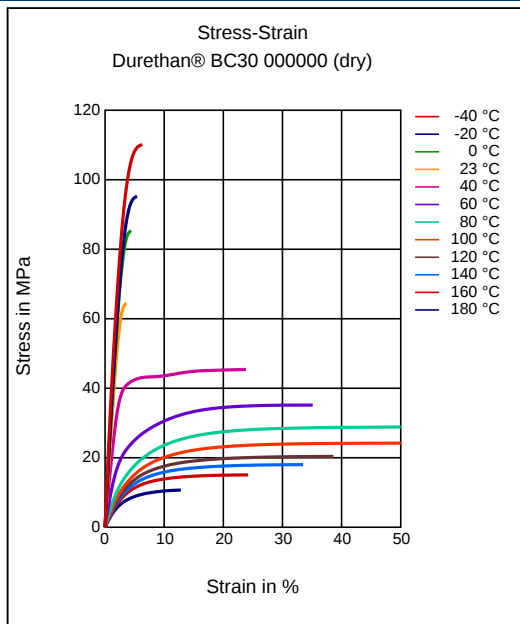
Viscosity-shear rate



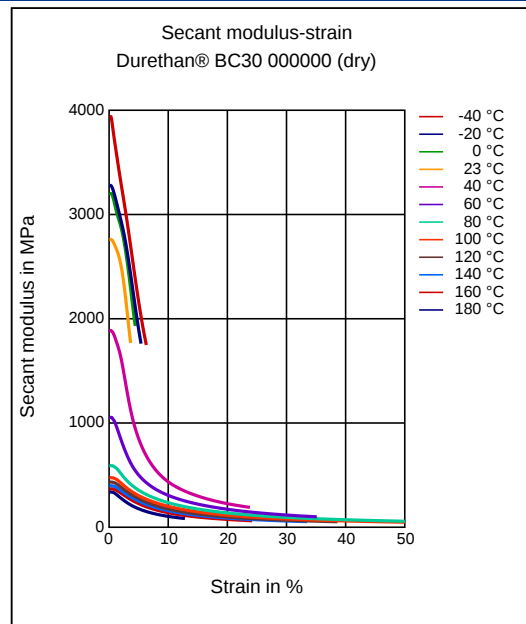
Shearstress-shear rate



Stress-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding

Special Characteristics

Impact modified

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 - 90 °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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