

Ultramid® B3WG12 HSP BK23228
PA6-GF60

BASF

Glass fibre reinforced and heat ageing resistant injection moulding grade with high flowability and excellent surface quality for structural parts with very high stiffness requirements.

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	22 / *	cm³/10min	ISO 1133
Temperature	275 / *	°C	-
Load	5 / *	kg	-
Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	21500 / 14000	MPa	ISO 527
Stress at Break	250 / 170	MPa	ISO 527
Strain at Break	2.5 / 4	%	ISO 527
Impact Strength (Charpy), +23°C	95 / 100	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	90 / 90	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	16 / 20	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	16 / 16	kJ/m²	ISO 179/1eA

Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	220 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	210 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	16 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	87 / *	E-6/K	ISO 11359-1/-2

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	4 / *	%	Sim. to ISO 62
Humidity absorption	1 / *	%	Sim. to ISO 62
Density	1720 / -	kg/m³	ISO 1183
Bulk density	700	kg/m³	-

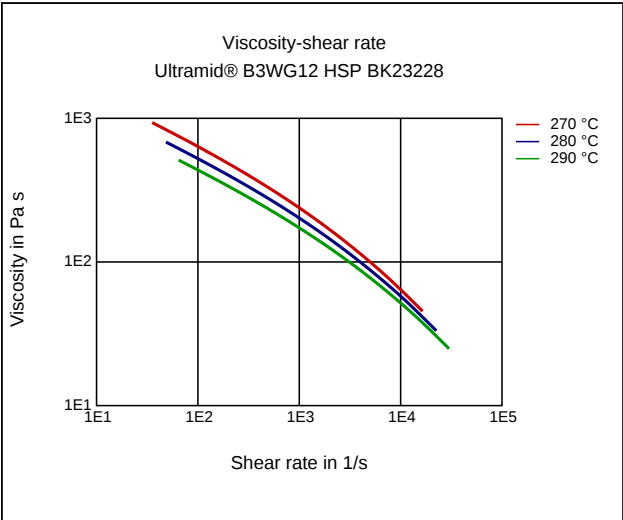
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	105 / *	cm³/g	ISO 307, 1157, 1628

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	300	°C	ISO 294
Injection Molding, mold temperature	100	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

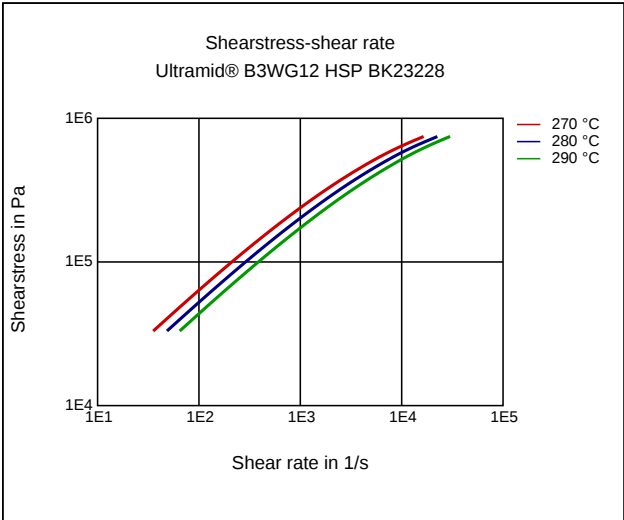
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-
Melt temperature	280 - 310	°C	-
Mold temperature	90 - 120	°C	-

Diagrams

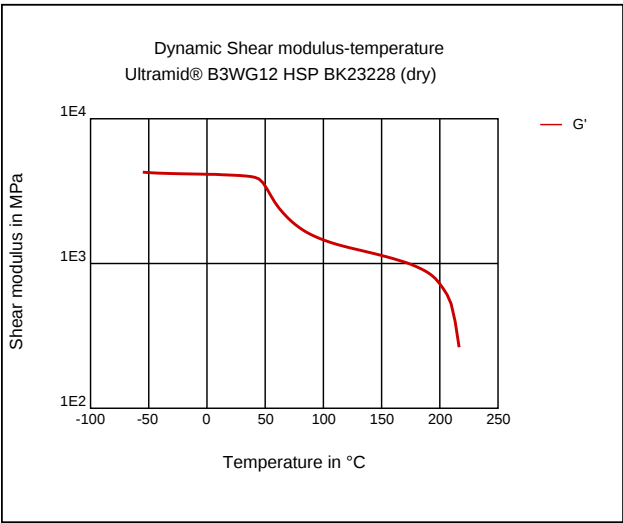
Viscosity-shear rate



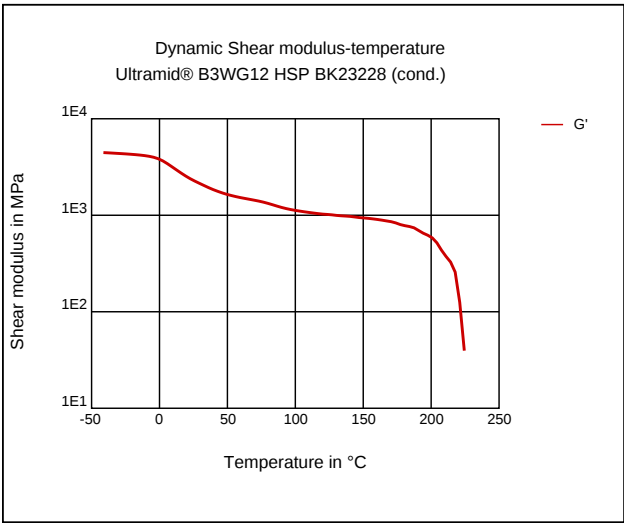
Shearstress-shear rate



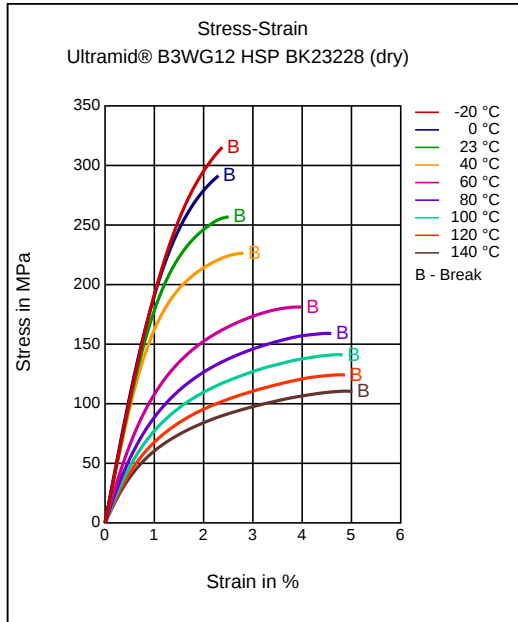
Dynamic Shear modulus-temperature



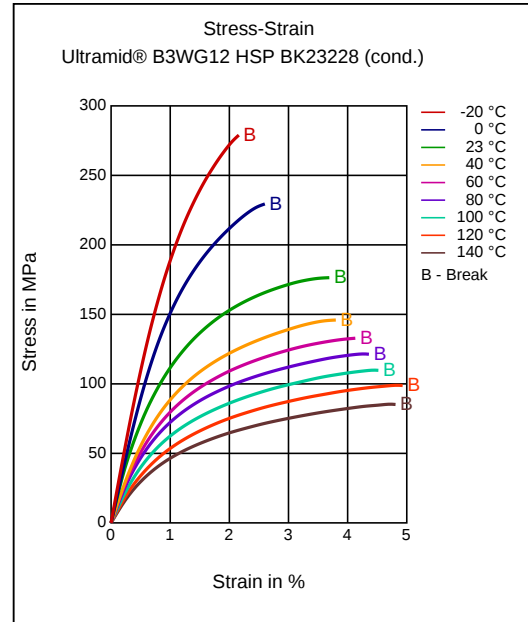
Dynamic Shear modulus-temperature



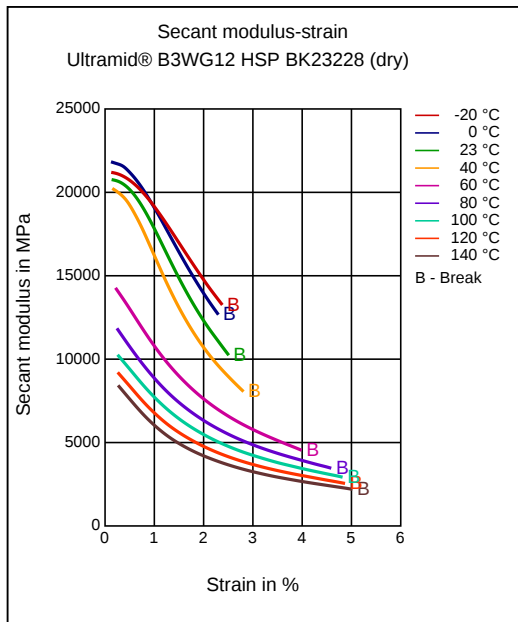
Stress-strain



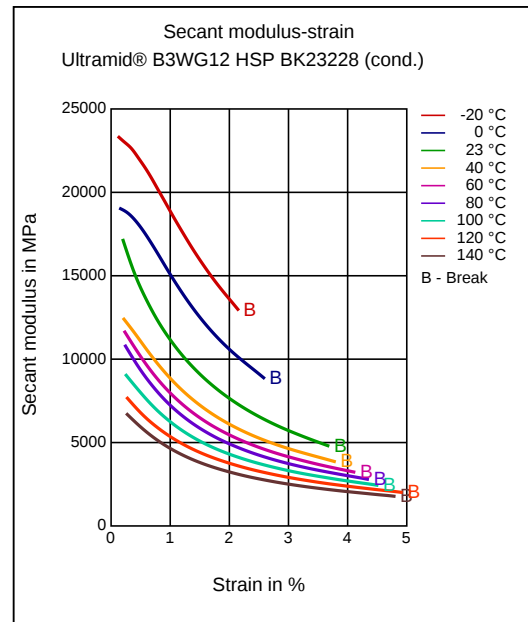
Stress-strain



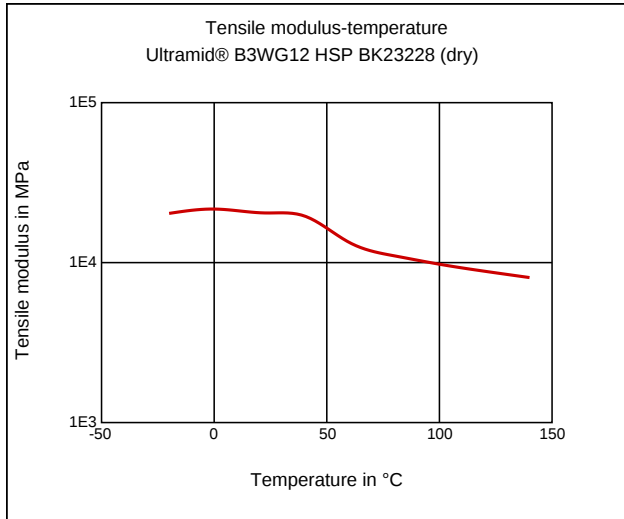
Secant modulus-strain



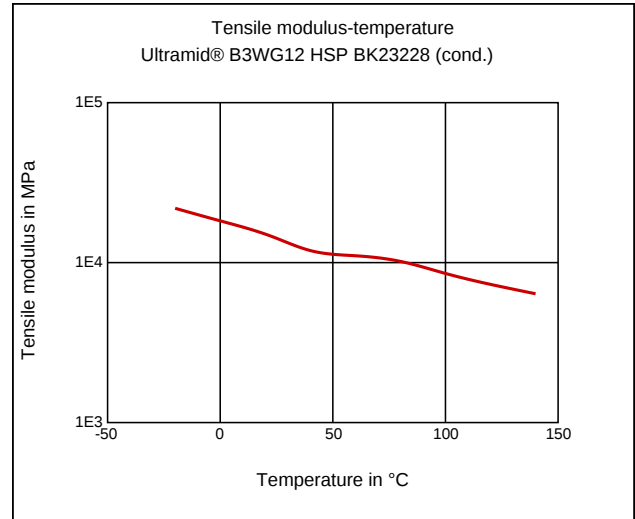
Secant modulus-strain



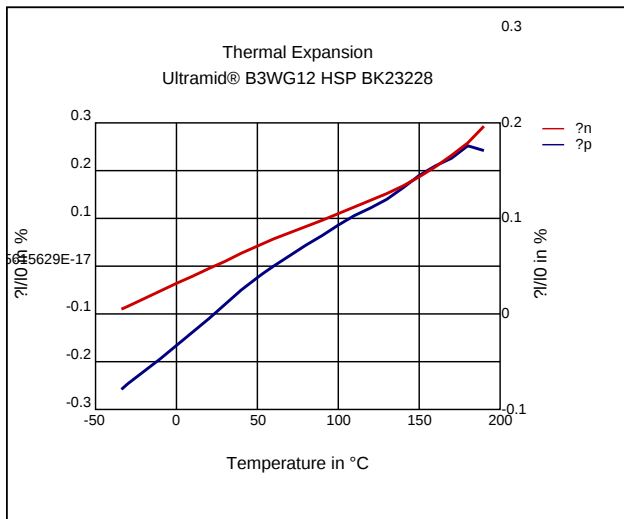
Tensile Modulus-Temperature



Tensile Modulus-Temperature



Coeff. of linear thermal expansion, normal



Characteristics

Processing

Injection Molding

Delivery form

Pellets, Black

Additives

Lubricants, Release agent

Special Characteristics

Heat aging stabilized

Injection Molding

PREPROCESSING

Pre/Post-processing, max. allowed water content: .15 %

Pre/Post-processing, Pre-drying, Temperature: 80 °C

Pre/Post-processing, Pre-drying, Time: 4 h

PROCESSING

injection molding, Melt temperature, range: 280 - 310 °C

injection molding, Melt temperature, recommended: 290 °C

injection molding, Mold temperature, range: 90 - 120 °C

injection molding, Mold temperature, recommended: 100 °C

injection molding, Dwell time, thermoplastics: 10 min

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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