

Ultramid® B3WG6 GPX BK23238
PA6-GF30

BASF

Glass fibre reinforced and heat ageing resistant injection moulding grade for primary use in plastic air intake manifolds.
This grade has been engineered to provide excellent long-term burst strength retention.

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	20 / *	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	9800 / 5400	MPa	ISO 527
Stress at Break	185 / 110	MPa	ISO 527
Strain at Break	3.5 / 8	%	ISO 527
Tensile Creep Modulus, 1000h	* / 4100	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	95 / 105	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	85 / 95	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	13 / 22	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	10 / 11	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)	200 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	220 / *	°C	ISO 75-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.6 / 33.4	-	IEC 62631-2-1
Relative permittivity, 1MHz	4.1 / 5.4	-	IEC 62631-2-1
Dissipation Factor, 100Hz	126 / 8930	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	201 / 1340	E-4	IEC 62631-2-1
Volume Resistivity	1.1E9 / 1.3E8	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 5.2E12	Ohm	IEC 62631-3-2
Electric Strength	47 / 29	kV/mm	IEC 60243-1
Comparative tracking index	375 / 375	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	6.6 / *	%	Sim. to ISO 62
Humidity absorption	2.35 / *	%	Sim. to ISO 62
Density	1350 / -	kg/m³	ISO 1183

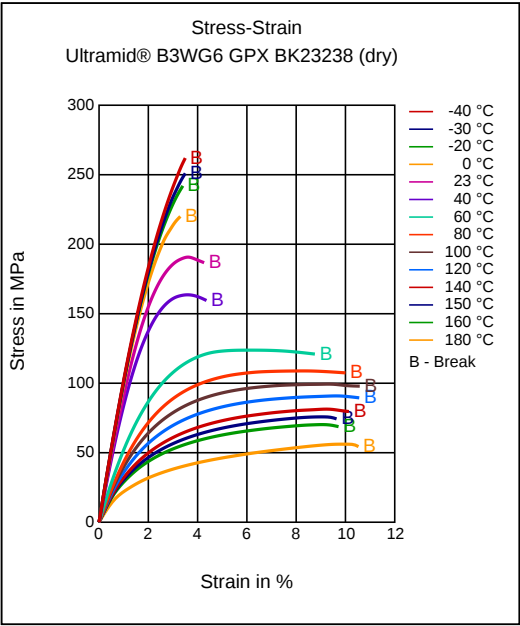
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	150 / *	cm³/g	ISO 307, 1157, 1628

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

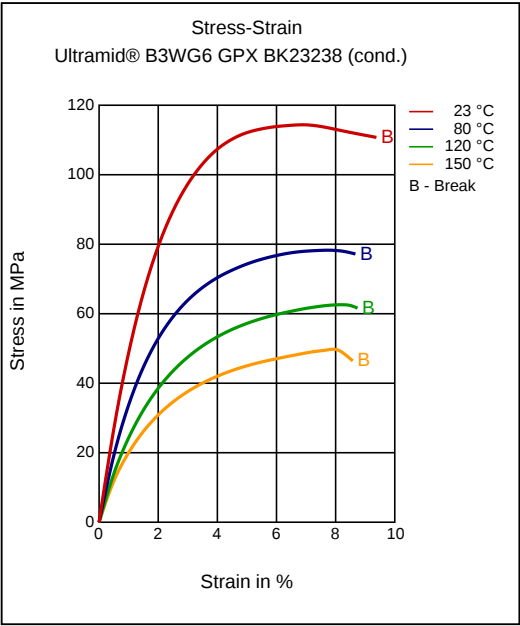
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	80 - 90	°C	-

Diagrams

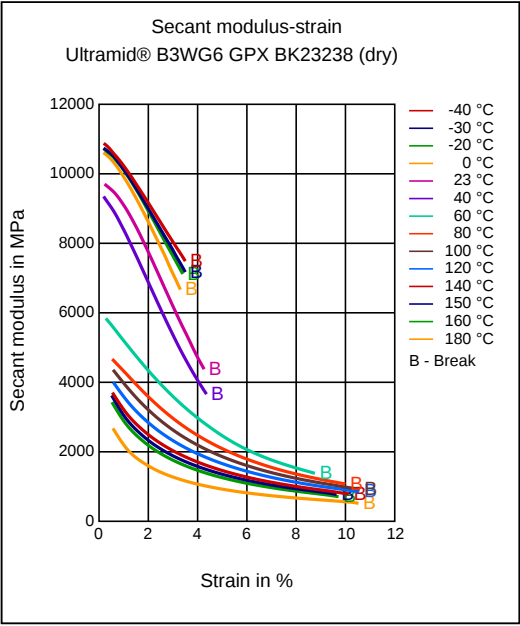
Stress-strain



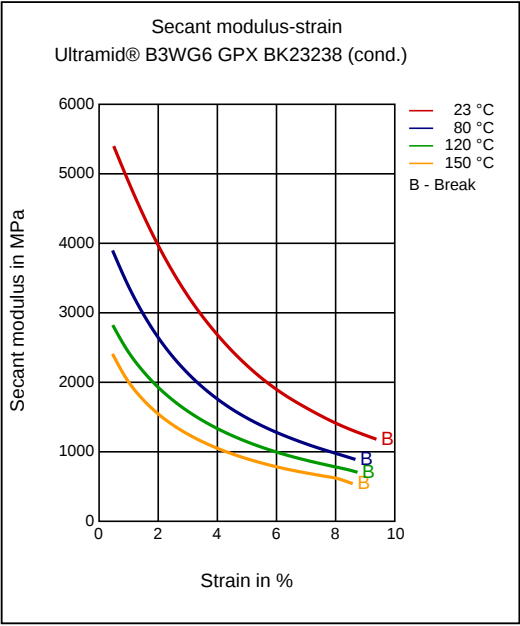
Stress-strain



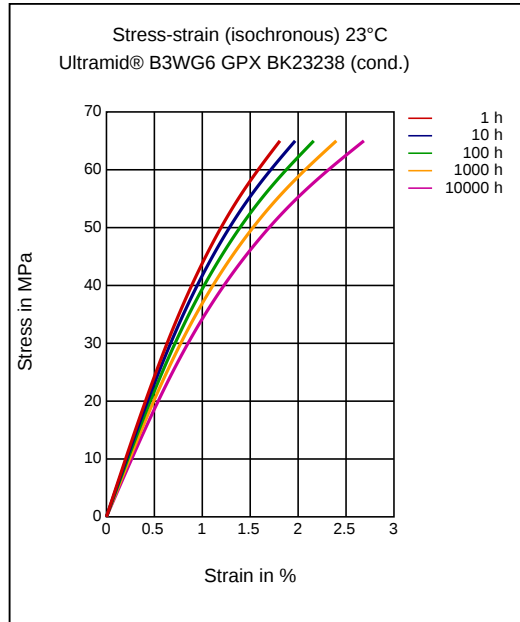
Secant modulus-strain



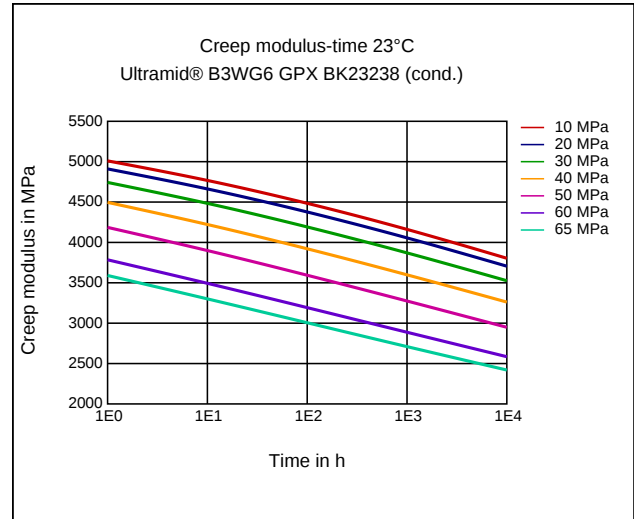
Secant modulus-strain



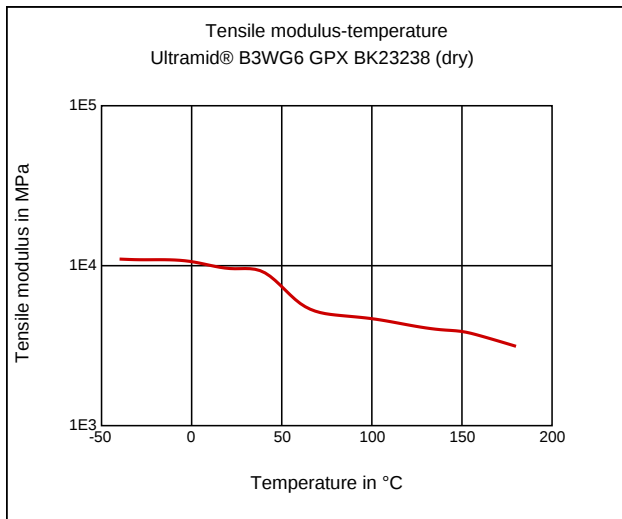
Stress-strain (isochronous) 23 °C



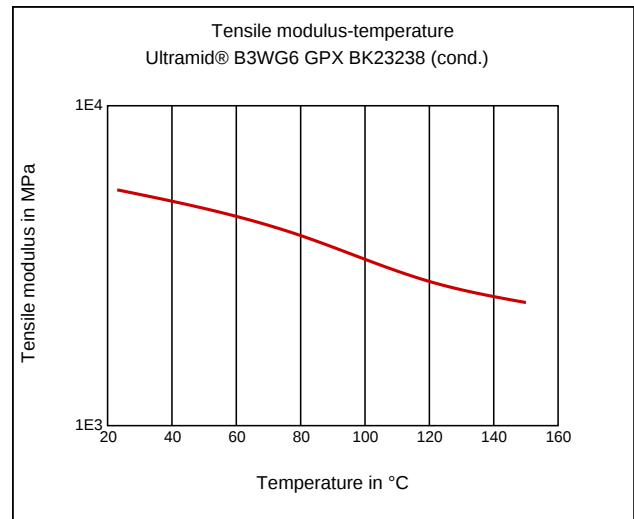
Creep modulus-time 23 °C



Tensile Modulus-Temperature



Tensile Modulus-Temperature



Characteristics

Processing

Injection Molding

Delivery form

Black

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: 270 - 290 °C

injection molding, Melt temperature, recommended: 280 °C

injection molding, Mold temperature, range: 80 - 90 °C

injection molding, Mold temperature, recommended: 80 °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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