

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

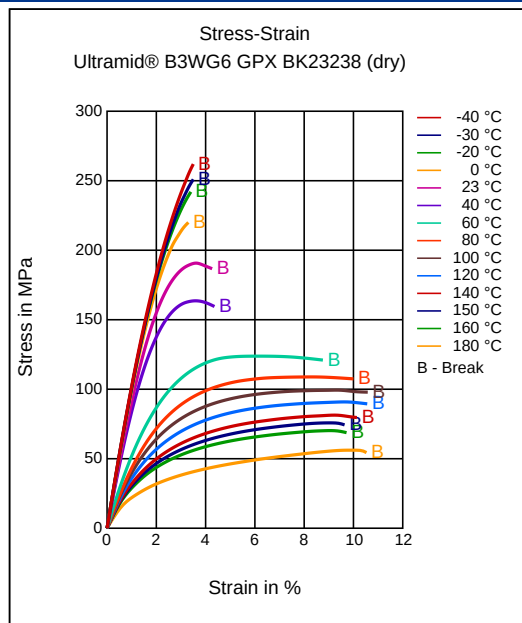
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	80 - 90	°C	-

Ultramid® B3WG6 GPX BK23238
PA6-GF30

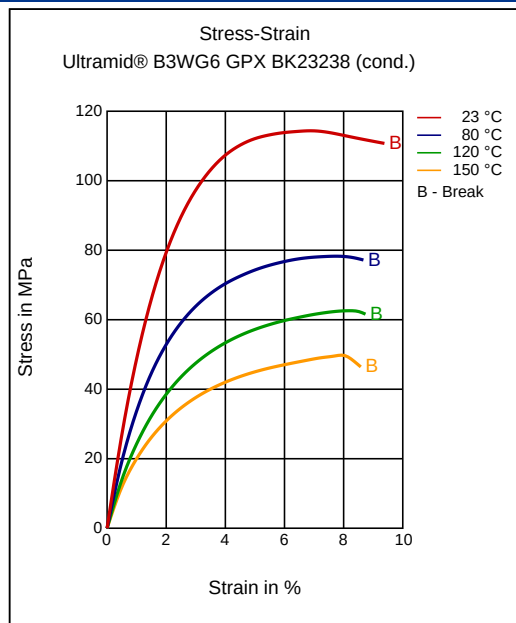
BASF

Diagrams

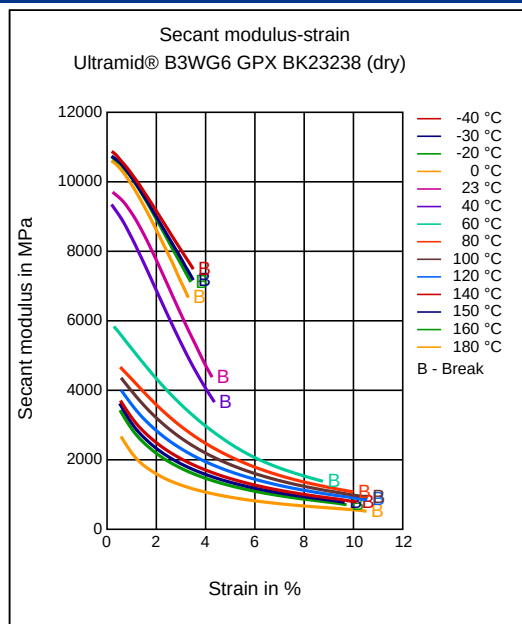
Stress-strain



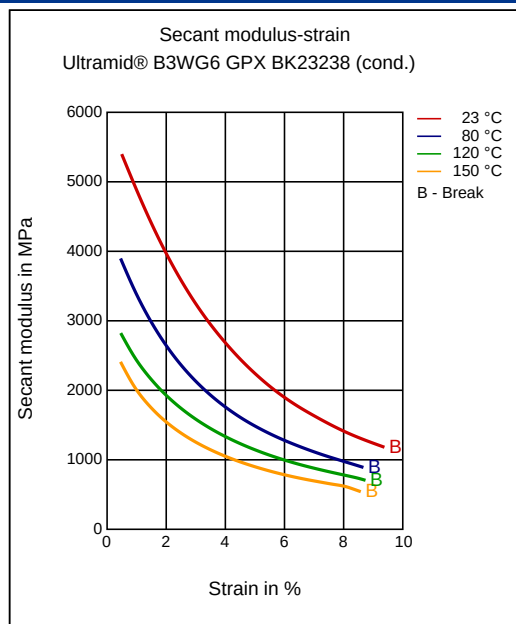
Stress-strain



Secant modulus-strain



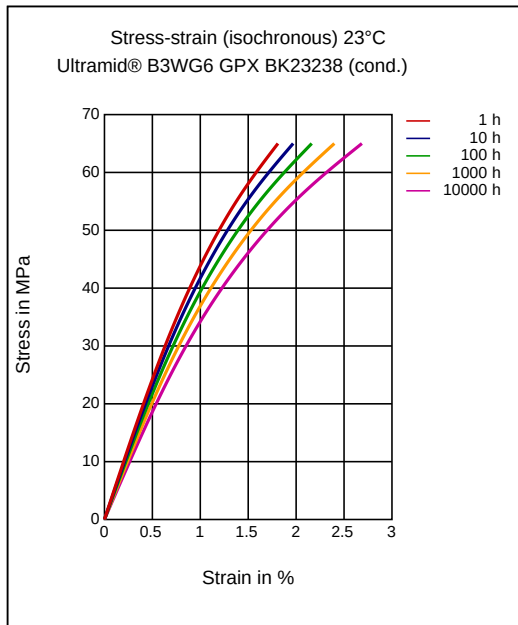
Secant modulus-strain



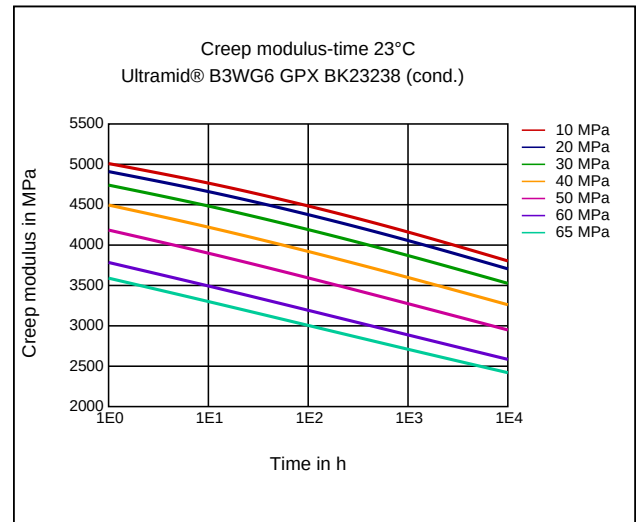
Ultramid® B3WG6 GPX BK23238 PA6-GF30

BASF

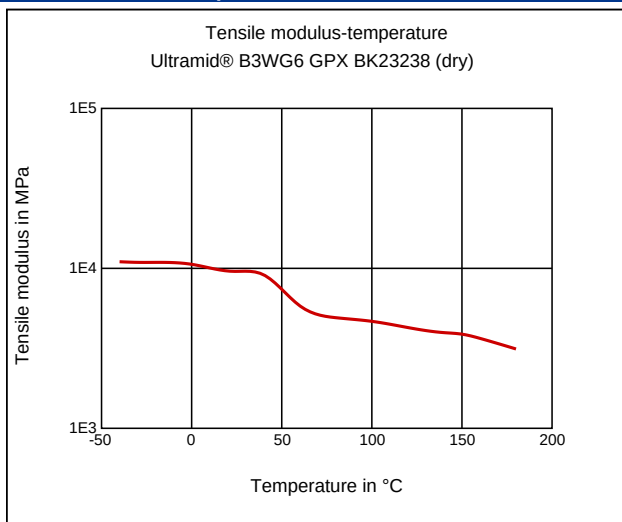
Stress-strain (isochronous) 23 °C



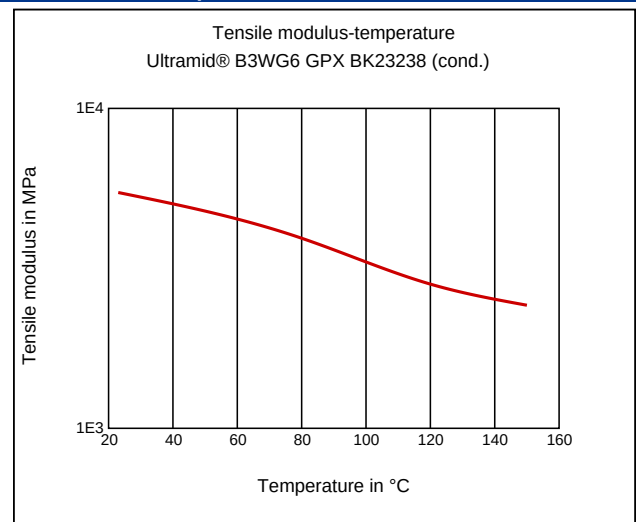
Creep modulus-time 23 °C



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