Ultramid® A3W2G10 BK20560

PA66-GF50 BASF

Glass fibre reinforced injection moulding grade with optimised heat ageing performance for industrial articles having very high rigidity.

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	10 / *	cm³/10min	ISO 1133
Temperature	275 / *	°C	-
Load	5 / *	kg	-
Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	16500 / 12000	MPa	ISO 527
Stress at Break	250 / 175	MPa	ISO 527
Strain at Break	2.7 / 4.1	%	ISO 527
Impact Strength (Charpy), +23°C	105 / 105	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	100 / 100	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	16 / 19	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	14 / 14	kJ/m²	ISO 179/1eA

Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	260 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	250 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	250 / *	°C	ISO 75-1/-2

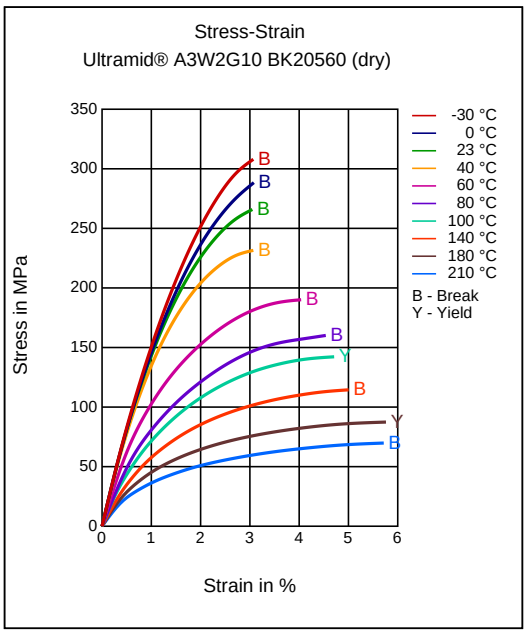
Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	4 / *	%	Sim. to ISO 62
Humidity absorption	1.2 / *	%	Sim. to ISO 62
Density	1580 / -	kg/m³	ISO 1183

Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	145 / *	cm³/g	ISO 307, 1157, 1628

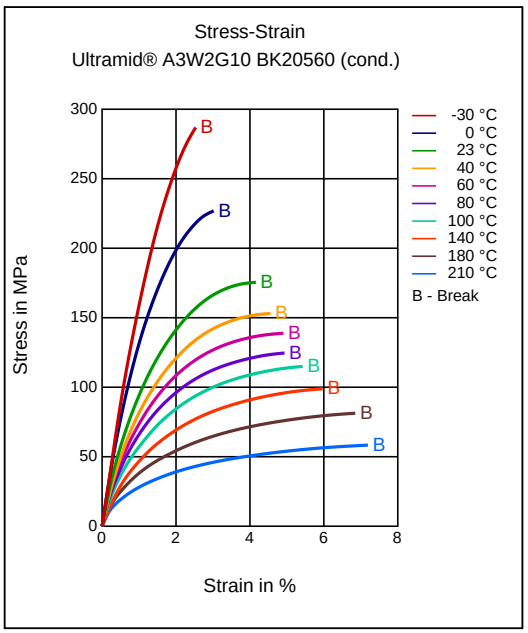
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-
Melt temperature	280 - 310	°C	-
Mold temperature	80 - 90	°C	-

Diagrams

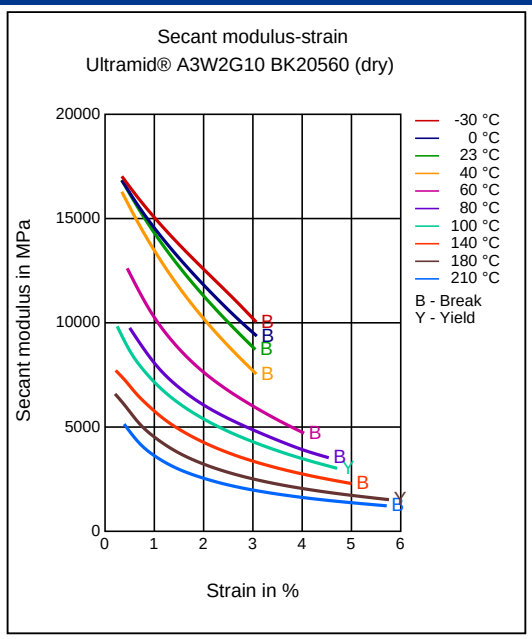
Stress-strain



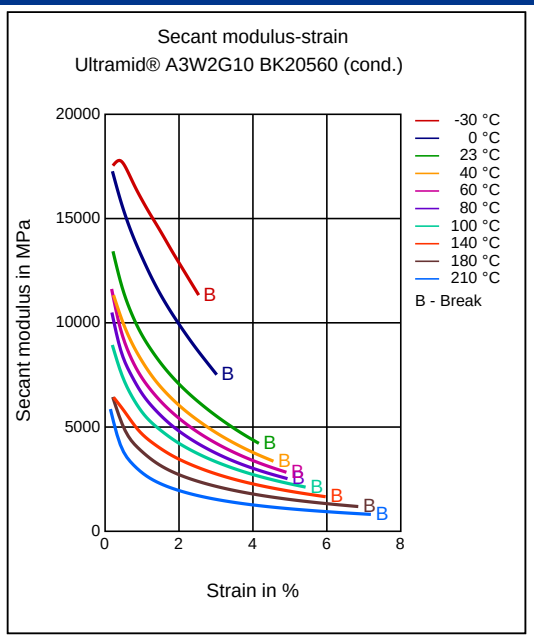
Stress-strain



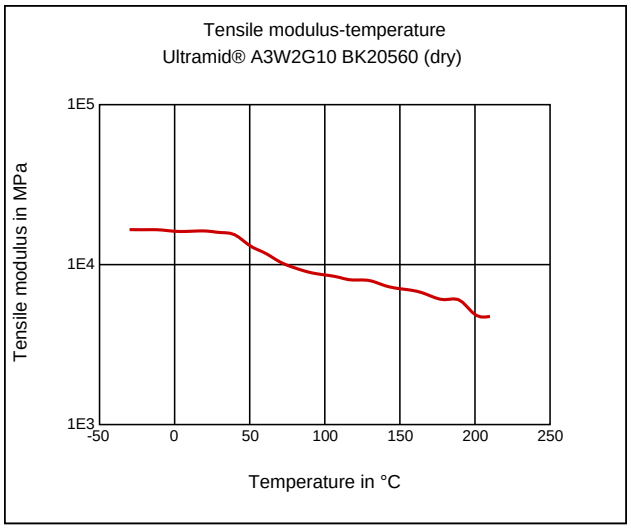
Secant modulus-strain



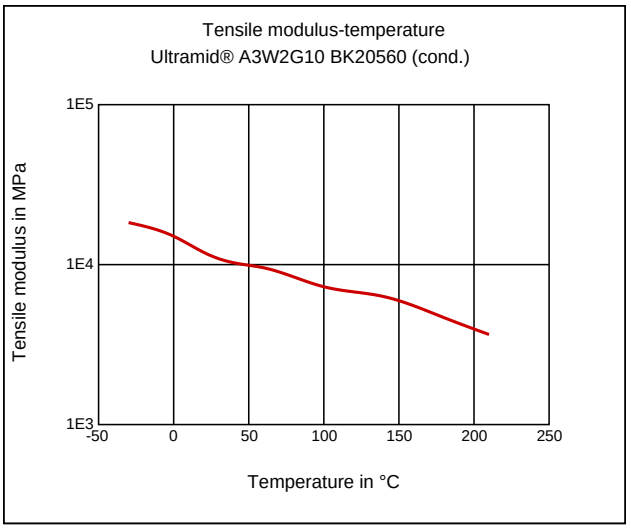
Secant modulus-strain



Tensile Modulus-Temperature



Tensile Modulus-Temperature



Characteristics

Processing
Injection Molding

Special Characteristics
Heat aging stabilized

Delivery form
Pellets, 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: 280 - 310 °C
injection molding, Melt temperature, recommended: 300 °C
injection molding, Mold temperature, range: 80 - 100 °C
injection molding, Mold temperature, recommended: 100 °C
injection molding, Dwell time, thermoplastics: 10 min

Disclaimer

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