

Ultramid® S3WG6 Balance bk564
PA610-GF30

BASF

Glass fibre reinforced, heat aging resistant injection moulding grade for industrial articles.

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	30 / *	cm³/10min	ISO 1133
Temperature	275 / *	°C	-
Load	5 / *	kg	-
Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.0 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	8500 / 6700	MPa	ISO 527
Stress at Break	150 / 110	MPa	ISO 527
Strain at Break	4 / 6	%	ISO 527
Impact Strength (Charpy), +23°C	86 / 85	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	82 / 85	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	13 / 13	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	8 / 8	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
Vicat softening temperature, 50°C/h 50N	217 / *	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	24 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	108 / *	E-6/K	ISO 11359-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	3.8 / 4.3	-	IEC 62631-2-1
Dissipation Factor, 1MHz	176 / 567	E-4	IEC 62631-2-1
Volume Resistivity	6.5E10 / 7.9E9	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 2.1E14	Ohm	IEC 62631-3-2
Comparative tracking index	- / 550	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	2.7 / *	%	Sim. to ISO 62
Humidity absorption	1 / *	%	Sim. to ISO 62
Density	1310 / -	kg/m³	ISO 1183

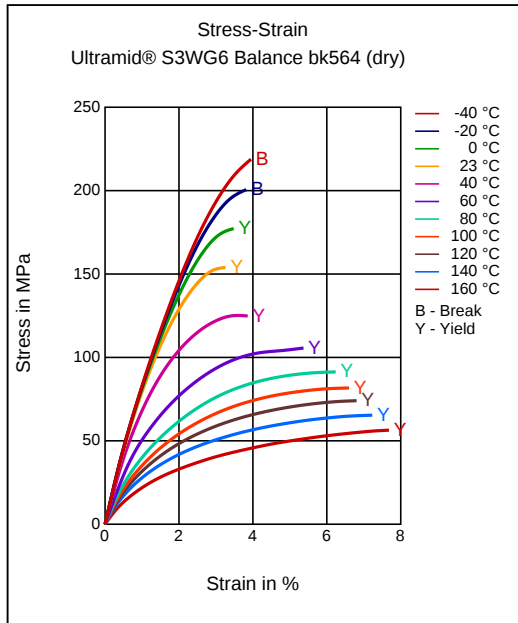
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	150 / *	cm³/g	ISO 307, 1157, 1628

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	270	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

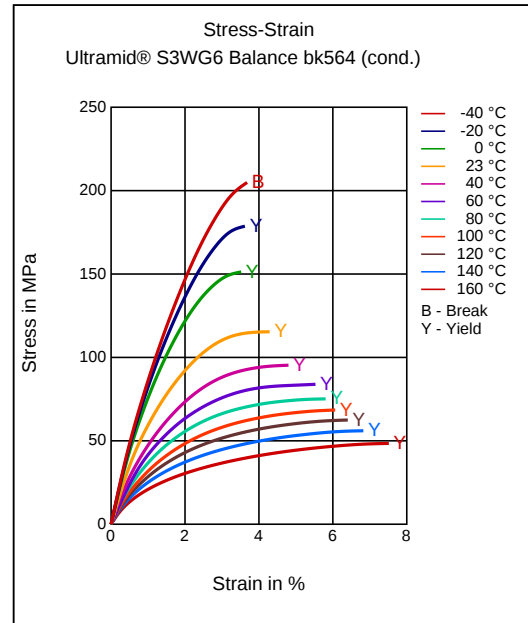
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	80 - 90	°C	-

Diagrams

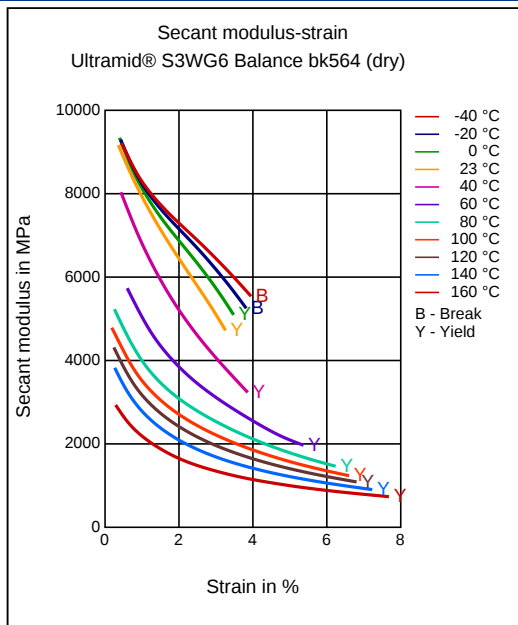
Stress-strain



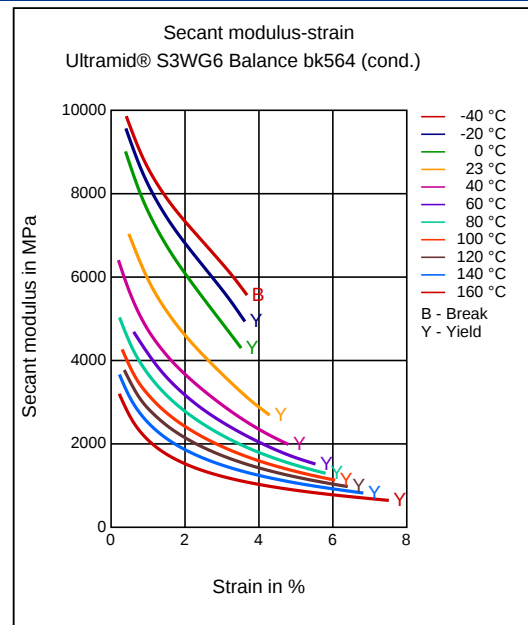
Stress-strain



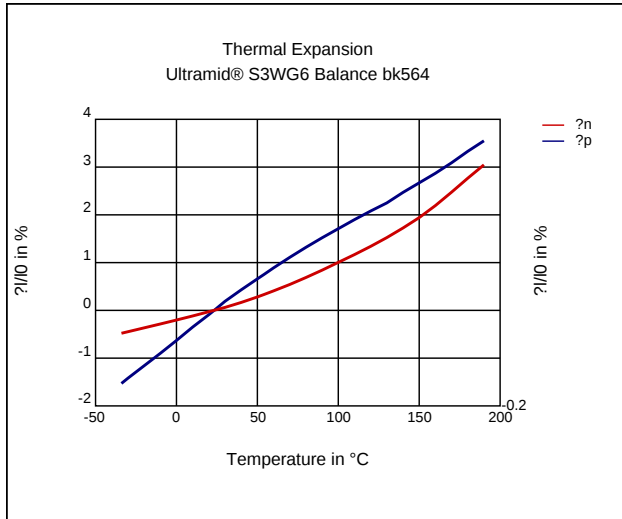
Secant modulus-strain



Secant modulus-strain



Coeff. of linear thermal expansion, normal



Characteristics

Processing

Injection Molding

Certifications

Contains renewable resources

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: 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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