

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 / *	cm ³ /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/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	82 / 85	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	13 / 13	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	8 / 8	kJ/m ²	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/m ³	ISO 1183

Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	150 / *	cm ³ /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

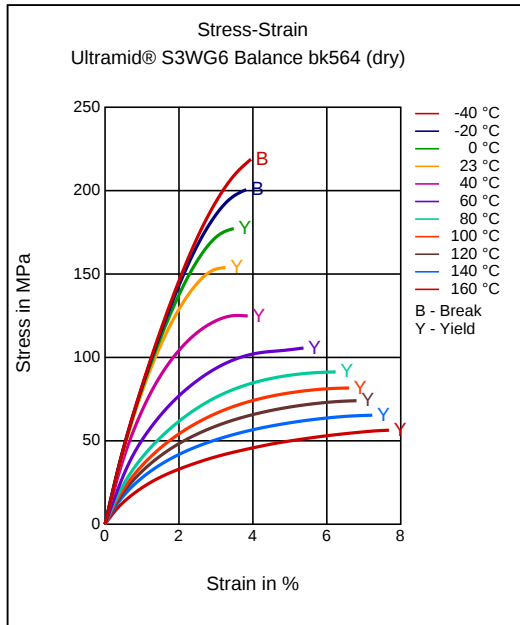
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	80 - 90	°C	-

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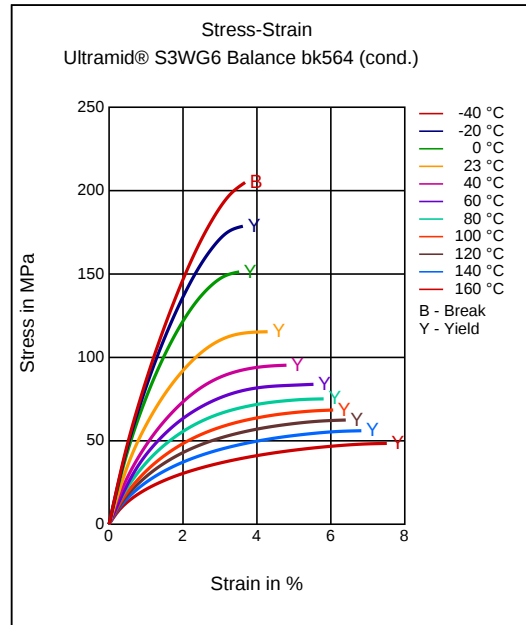
BASF

Diagrams

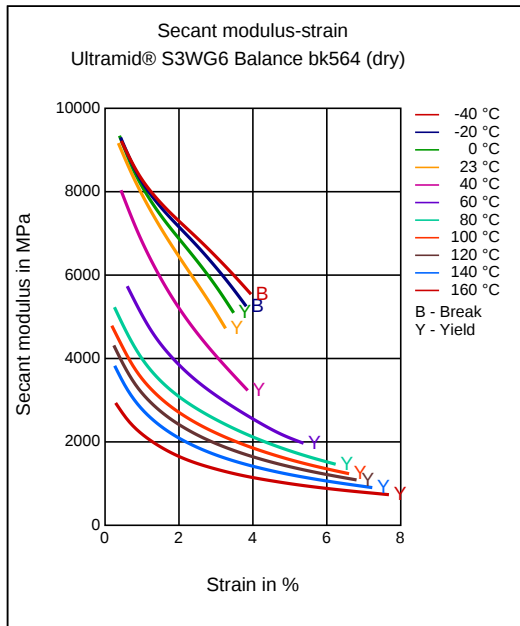
Stress-strain



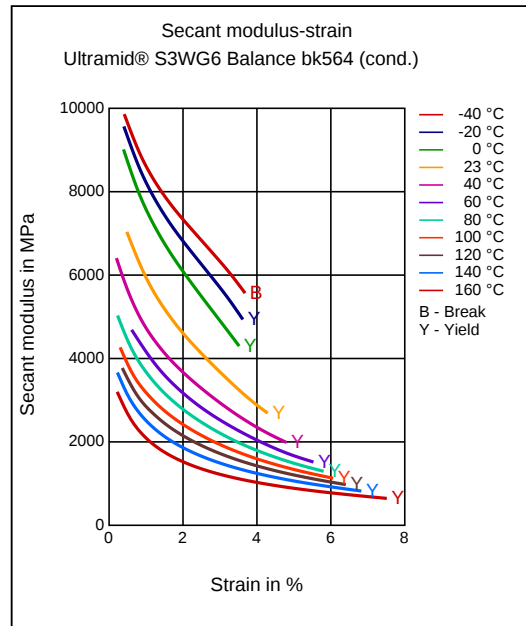
Stress-strain



Secant modulus-strain



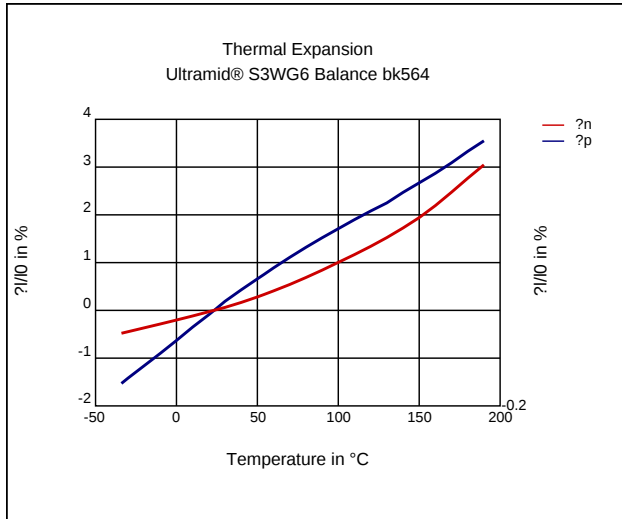
Secant modulus-strain



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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