

Ultramid® A3U42G6
(PA66+PA6)-GF30 FR(40)

BASF

Without halogenes flame retarded glass fiber reinforced injection moulding grade; light colorable; outstanding mechanical and electrical properties.

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	0.9 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	10800 / 7400	MPa	ISO 527
Stress at Break	130 / 90	MPa	ISO 527
Strain at Break	3 / 4.5	%	ISO 527
Impact Strength (Charpy), +23°C	60 / 65	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	55 / 60	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	8 / 11	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	7 / 7	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C)	11000 / 7500	MPa	ISO 178

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)	230 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	250 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	22 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	79 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	V-0 / *	class	UL 94
Thickness tested	1.6 / *	mm	-
UL recognition	yes / *	-	-
Burning Behav. at thickness h	V-0 / *	class	UL 94
Thickness tested	0.4 / *	mm	-
UL recognition	yes / *	-	-
Burning Behav. 5V at Thickness h	5VA / *	class	IEC 60695-11-20
Thickness tested	1.6 / *	mm	-
Yellow Card available	yes / *	-	-
Oxygen index	37 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	3.9 / 4.1	-	IEC 62631-2-1
Dissipation Factor, 1MHz	150 / 290	E-4	IEC 62631-2-1
Volume Resistivity	1E11 / 1E9	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric Strength	38 / 30	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	5 / *	%	Sim. to ISO 62
Humidity absorption	1.7 / *	%	Sim. to ISO 62
Density	1440 / -	kg/m³	ISO 1183
Bulk density	700	kg/m³	-

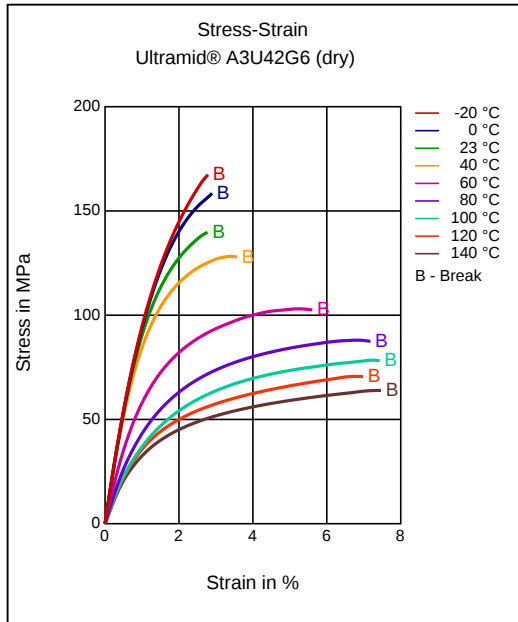
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	290	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

Processing Recommendation Injection Molding

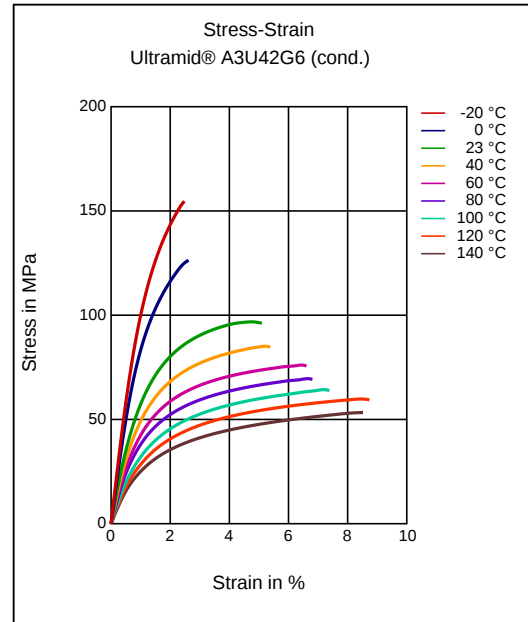
	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-
Melt temperature	280 - 300	°C	-
Mold temperature	80 - 90	°C	-

Diagrams

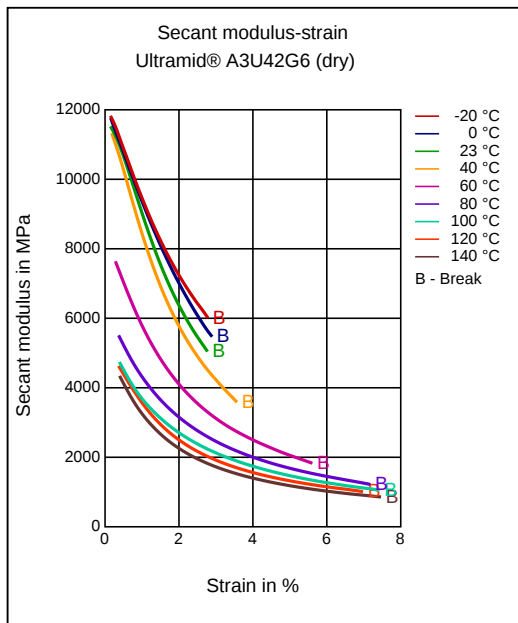
Stress-strain



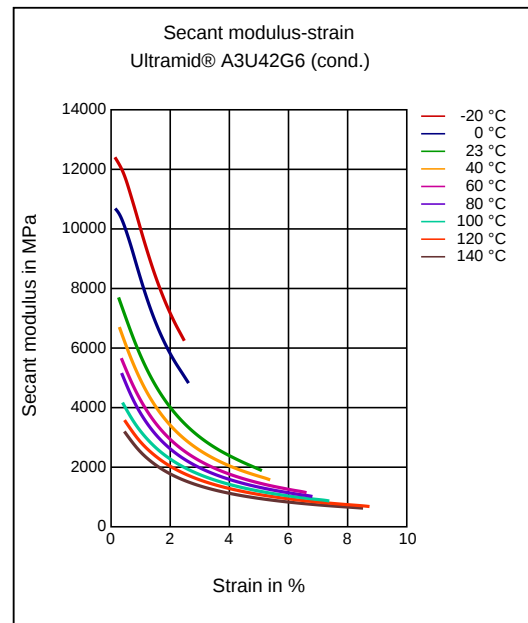
Stress-strain



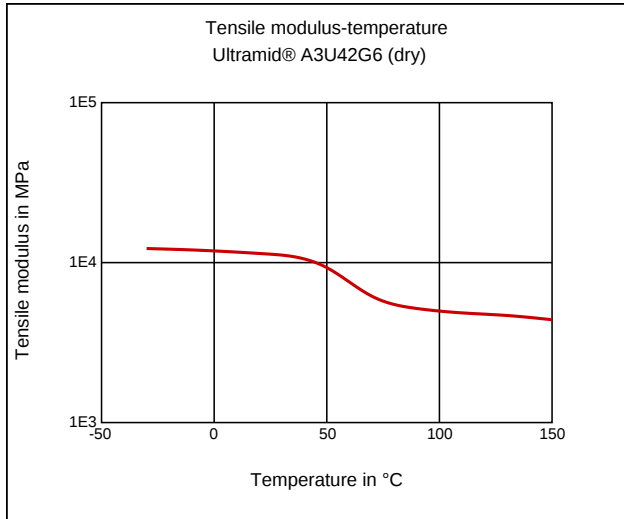
Secant modulus-strain



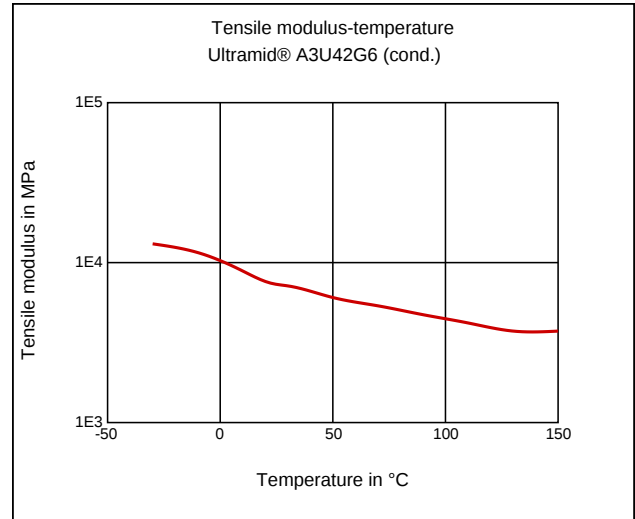
Secant modulus-strain



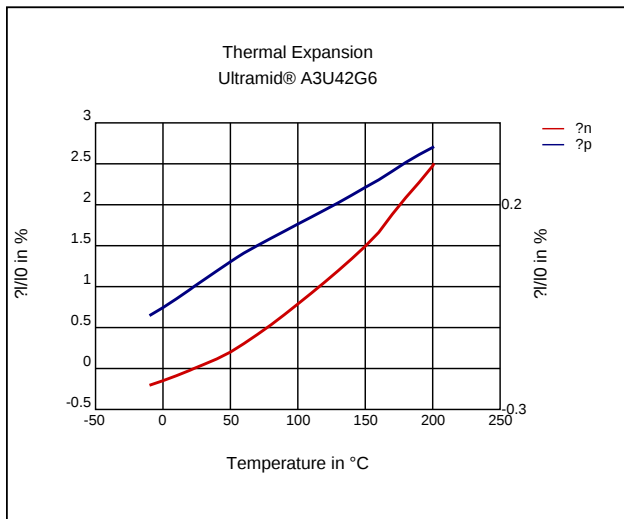
Tensile Modulus-Temperature



Tensile Modulus-Temperature



Coeff. of linear thermal expansion, normal



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Additives

Release agent

Special Characteristics

Flame retardant, Halogen-free

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 - 300 °C

injection molding, Melt temperature, recommended: 290 °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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