

Ultramid® B3U30G6

PA6-GF30 FR(30)

BASF

Without halogens and phosphorous flame retardant glass fiber reinforced injection molding grade with outstanding free-flow properties and good electrical properties ; resistant to glow wire test to 960 °C. Due to the halide free stabilization the impact on corrosion is minimized and sensitive electronic components are better protected.

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	140 / *	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	7700 / 3500	MPa	ISO 527
Stress at Break	90 / 45	MPa	ISO 527
Strain at Break	3.2 / 10	%	ISO 527
Impact Strength (Charpy), +23°C	40 / 80	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	25 / 25	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	3.7 / 6	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	2.4 / 2.2	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C)	7500 / 2900	MPa	ISO 178

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)	180 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	210 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	40 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	88 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	V-2 / *	class	UL 94
Thickness tested	1.6 / *	mm	-
UL recognition	yes / *	-	-
Burning Behav. at thickness h	V-2 / *	class	UL 94
Thickness tested	0.8 / *	mm	-
UL recognition	yes / *	-	-

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	4 / 4.8	-	IEC 62631-2-1
Dissipation Factor, 1MHz	200 / 1000	E-4	IEC 62631-2-1
Volume Resistivity	1E13 / 1E9	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric Strength	35 / 30	kV/mm	IEC 60243-1
Comparative tracking index	- / 475	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	5.6 / *	%	Sim. to ISO 62
Humidity absorption	1.75 / *	%	Sim. to ISO 62
Density	1440 / -	kg/m³	ISO 1183
Bulk density	700	kg/m³	-

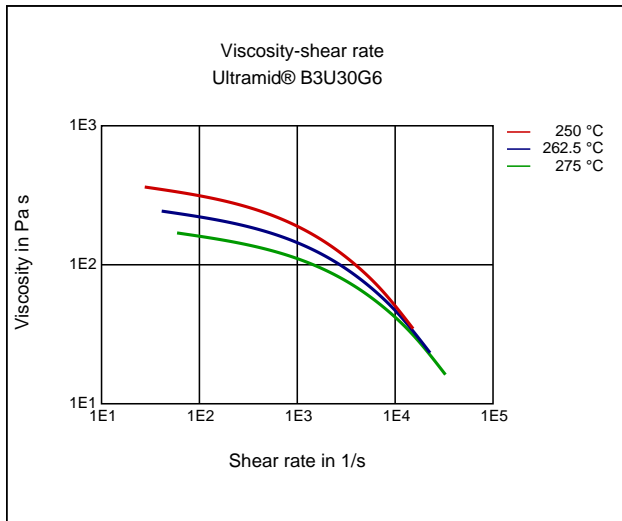
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	125 / *	cm³/g	ISO 307, 1157, 1628

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-

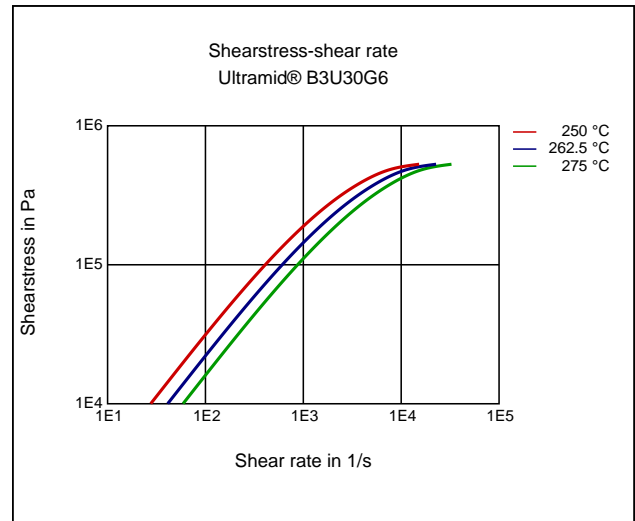
Melt temperature	250 - 275	°C	-
Mold temperature	80 - 90	°C	-

Diagrams

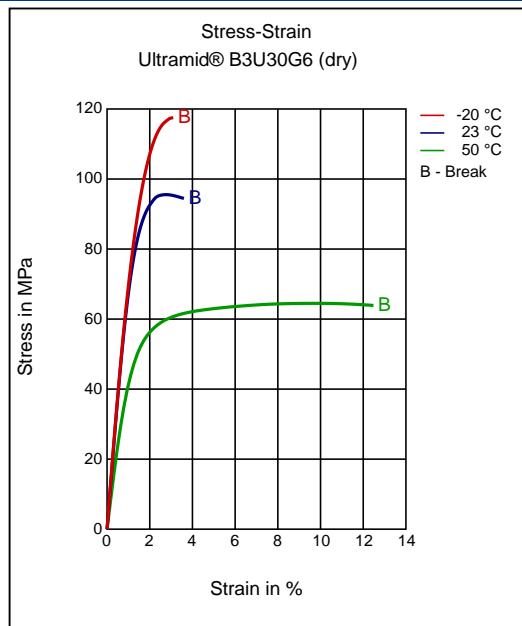
Viscosity-shear rate



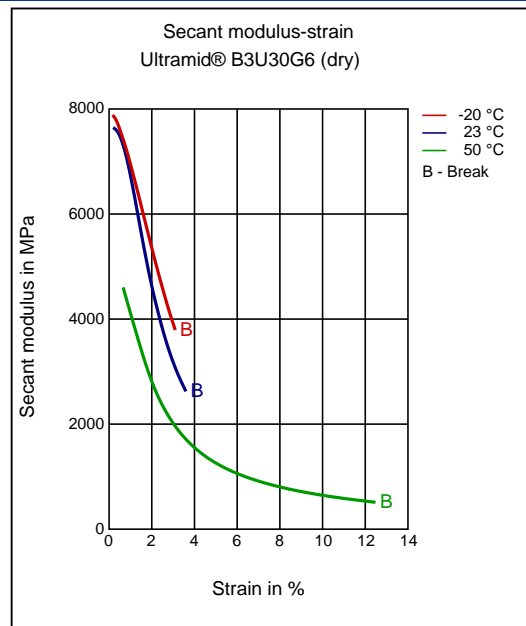
Shearstress-shear rate



Stress-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Special Characteristics

Flame retardant, Halogen-free

Applications

Electrical and Electronical

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: 250 - 275 °C

injection molding, Melt temperature, recommended: 270 °C

injection molding, Mold temperature, range: 80 - 90 °C

injection molding, Mold temperature, recommended: 80 °C

injection molding, Dwell time, thermoplastics: 10 min

Chemical Media Resistance

Acids

- ✓ Acetic Acid (5% by mass) (23 °C)

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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