

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	%	-

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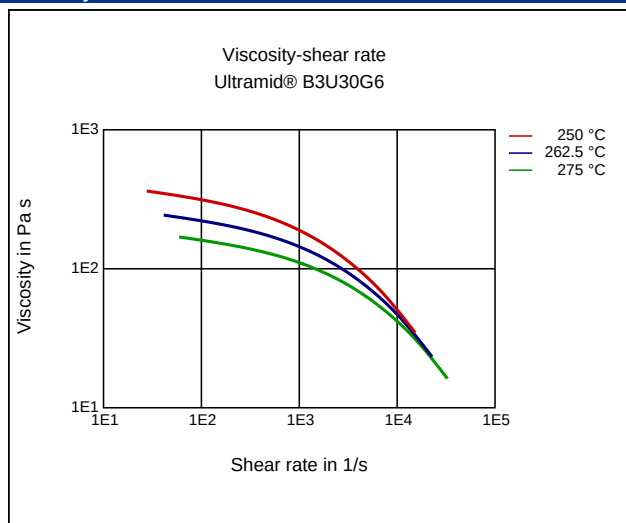
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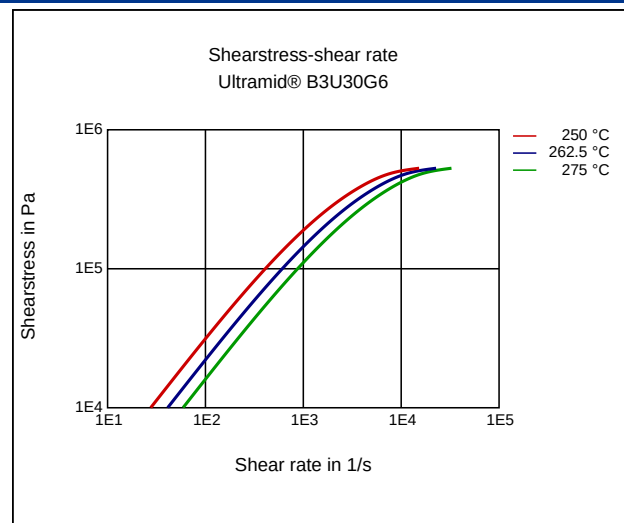
Melt temperature	250 - 275	°C	-
Mold temperature	80 - 90	°C	-

Diagrams

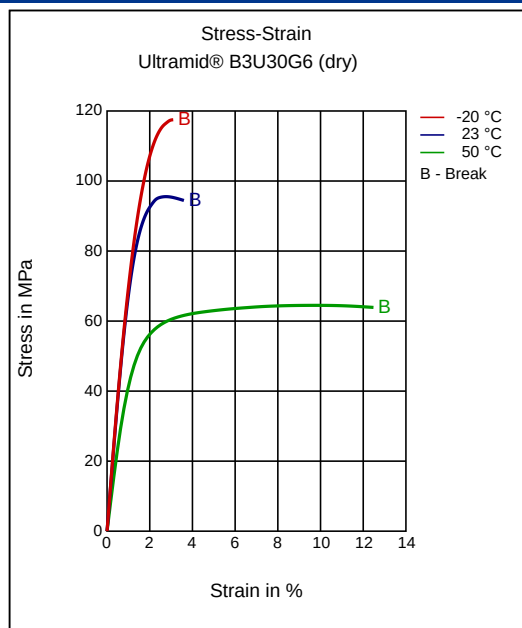
Viscosity-shear rate



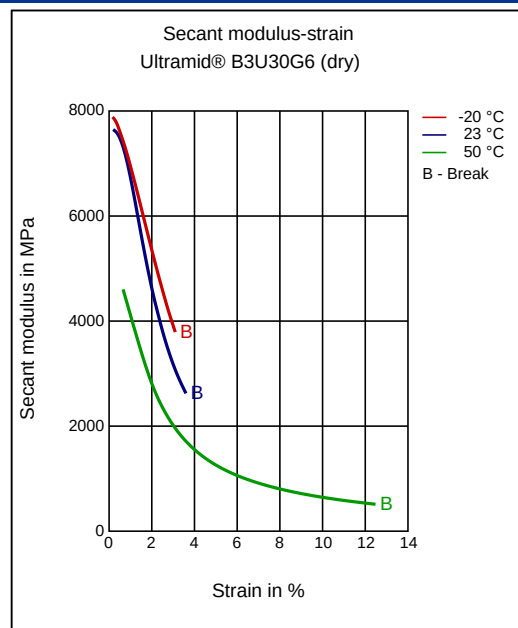
Shearstress-shear rate



Stress-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Special Characteristics

Flame retardant, Halogen-free

Applications

Electrical and Electronical

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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)