

Ultramid® B3EG10
PA6-GF50

BASF

Glass fiber reinforced injection moulding grade for industrial articles having very high rigidity.

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	15 / *	cm³/10min	ISO 1133
Temperature	275 / *	°C	-
Load	5 / *	kg	-

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	16000 / 11000	MPa	ISO 527
Stress at Break	235 / 160	MPa	ISO 527
Strain at Break	3 / 5.5	%	ISO 527
Tensile Creep Modulus, 1h	* / 9600	MPa	ISO 899-1
Tensile Creep Modulus, 1000h	* / 7400	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	100 / 110	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	90 / -	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	22 / 30	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	16 / -	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)	215 / *	°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	220 / *	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	15 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	73 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB / *	class	UL 94
Thickness tested	1.5 / *	mm	-
UL recognition	yes / *	-	-
Oxygen index	22.5 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	4.2 / 6.1	-	IEC 62631-2-1
Dissipation Factor, 100Hz	140 / 1400	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	140 / 1400	E-4	IEC 62631-2-1
Volume Resistivity	1E13 / 1E10	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E10	Ohm	IEC 62631-3-2
Electric Strength	41 / 35	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	4.8 / *	%	Sim. to ISO 62
Humidity absorption	1.5 / *	%	Sim. to ISO 62
Density	1550 / -	kg/m³	ISO 1183

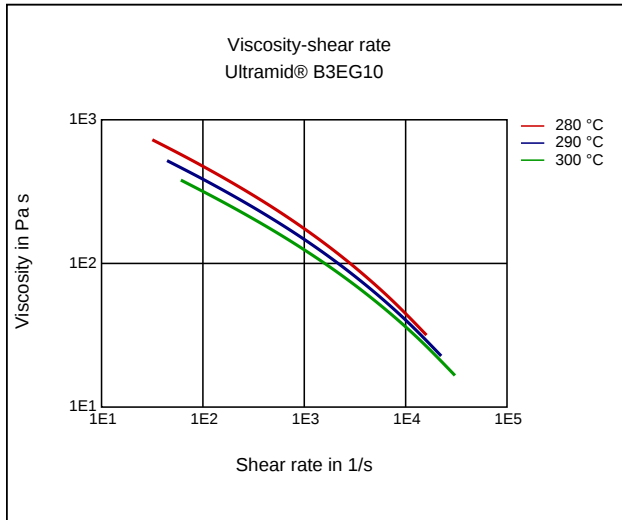
Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	135 / *	cm³/g	ISO 307, 1157, 1628

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	300	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

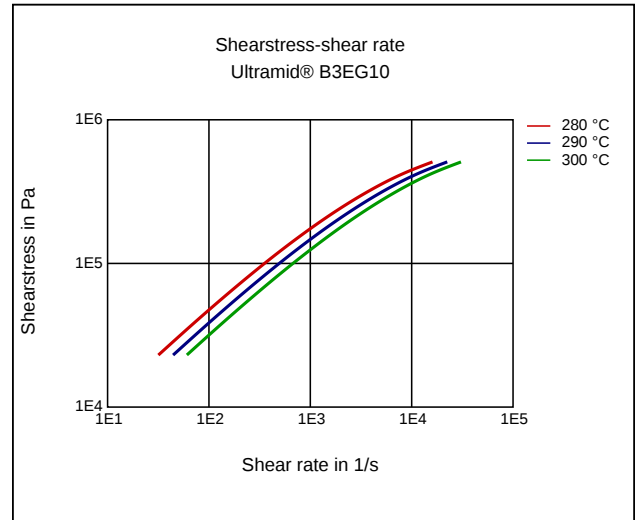
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-
Melt temperature	280 - 300	°C	-
Mold temperature	80 - 90	°C	-

Diagrams

Viscosity-shear rate



Shearstress-shear rate



Characteristics

Processing

Injection Molding

Additives

Lubricants, Release agent

Delivery form

Pellets

Special Characteristics

Heat aging stabilized

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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