

Ultradur® B 4406 G6 HSP
PBT-GF30 FR

BASF

Easy flowing Injection molding grade with 30% glass fibers for parts requiring enhanced fire resistance (eg relay housings, plug-in connector, switch and lamp parts)

Abbreviated designation according to ISO 1043: PBT-GF30 FR(17)

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	12	cm³/10min	ISO 1133
Temperature	275	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	11700	MPa	ISO 527
Stress at Break	140	MPa	ISO 527
Strain at Break	1.9	%	ISO 527
Impact Strength (Charpy), +23°C	50	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	7	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C)	11300	MPa	ISO 178

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	223	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	205	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	220	°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	108	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	-	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Volume Resistivity	1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	1E14	Ohm	IEC 62631-3-2
Electric Strength	37	kV/mm	IEC 60243-1
Comparative tracking index	175	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.4	%	Sim. to ISO 62
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1700	kg/m³	ISO 1183
Bulk density	750	kg/m³	-

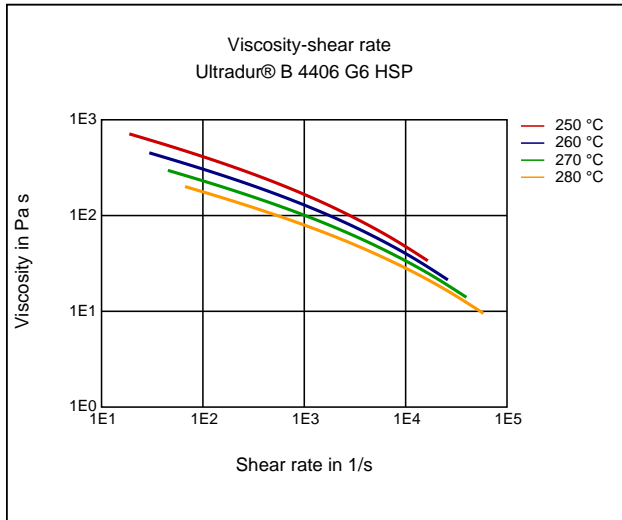
Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Viscosity number	90	cm³/g	ISO 307, 1157, 1628

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
Injection Molding, injection velocity	200	mm/s	ISO 294

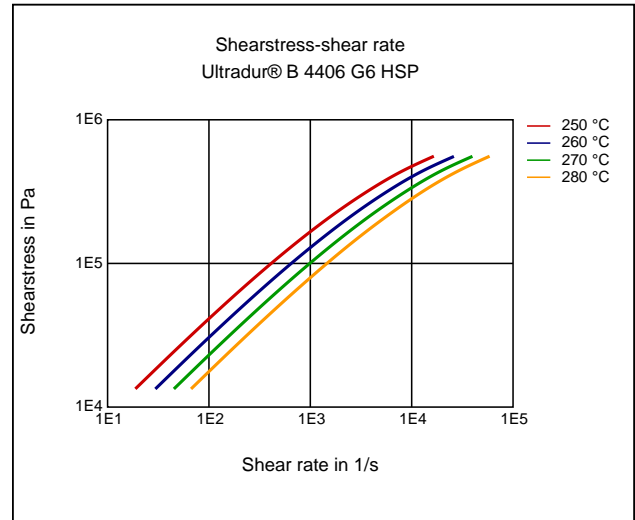
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80 - 120	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.04	%	-
Melt temperature	250 - 280	°C	-
Mold temperature	60 - 100	°C	-

Diagrams

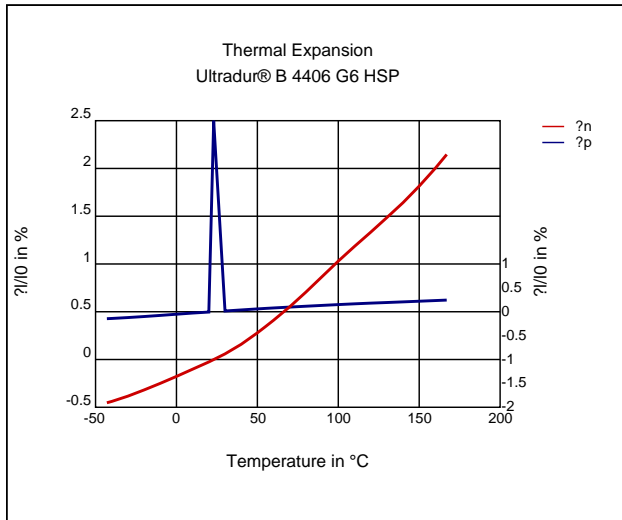
Viscosity-shear rate



Shearstress-shear rate



Coeff. of linear thermal expansion, normal



Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant

Applications

Electrical and Electronical

Injection Molding

PREPROCESSING

Pre/Post-processing, max. allowed water content: .04 %
Pre/Post-processing, Pre-drying, Temperature: 80 - 120 °C
Pre/Post-processing, Pre-drying, Time: 4 h

PROCESSING

injection molding, Melt temperature, range: 250 - 275 °C
injection molding, Melt temperature, recommended: 260 °C
injection molding, Mold temperature, range: 60 - 100 °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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