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	-

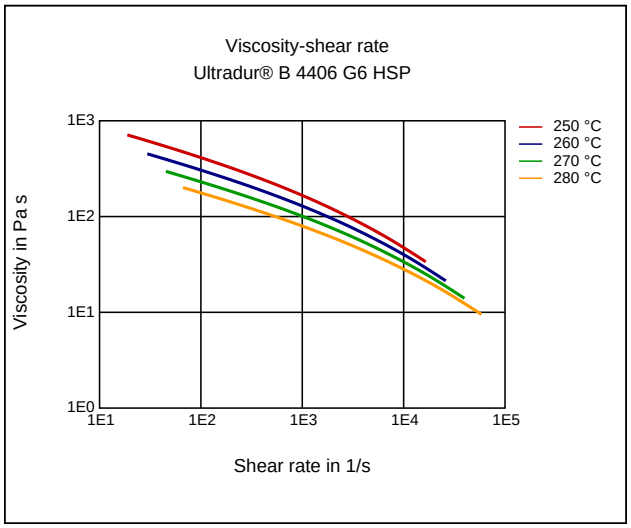
Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Viscosity number	90	cm³/g	ISO 307, 1157, 1628

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

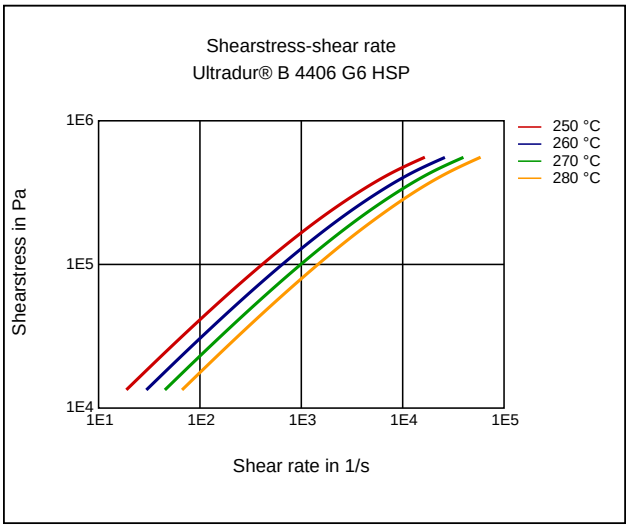
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80 - 120	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.04	%	-
Melt temperature	250 - 280	°C	-
Mold temperature	60 - 100	°C	-

Diagrams

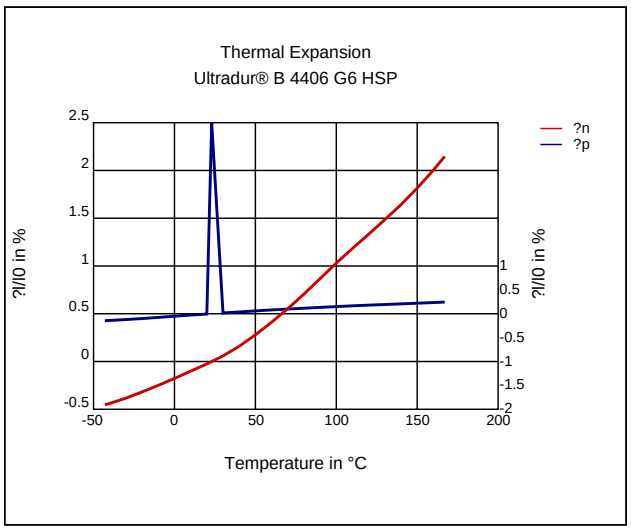
Viscosity-shear rate



Shearstress-shear rate



Coeff. of linear thermal expansion, normal



Characteristics

Processing

Injection Molding

Applications

Electrical and Electronical

Special Characteristics

Flame retardant

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

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