Ultradur® B 4300 G2 High Speed

PBT-GF10 BASF

Easy flowing injection molding grade with 10 % glass fibers for technical parts; rigid, tough and dimensionally stable, e.g. switches, connectors and small automotive parts.

Abbreviated designation according to ISO 1043: PBT-GF10

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	28	cm³/10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	0.9	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	4400	MPa	ISO 527
Stress at Break	85	MPa	ISO 527
Strain at Break	3.9	%	ISO 527
Impact Strength (Charpy), +23°C	25	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	26	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	3.5	kJ/m²	ISO 179/1eA

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)	165	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	210	°C	ISO 75-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94
Thickness tested	1.5	mm	-
UL recognition	yes	-	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.6	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.6	-	IEC 62631-2-1
Dissipation Factor, 100Hz	12	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	150	E-4	IEC 62631-2-1
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	1E13	Ohm	IEC 62631-3-2
Electric Strength	37	kV/mm	IEC 60243-1
Comparative tracking index	300	-	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	1370	kg/m³	ISO 1183

Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Viscosity number	105	cm³/g	ISO 307, 1157, 1628

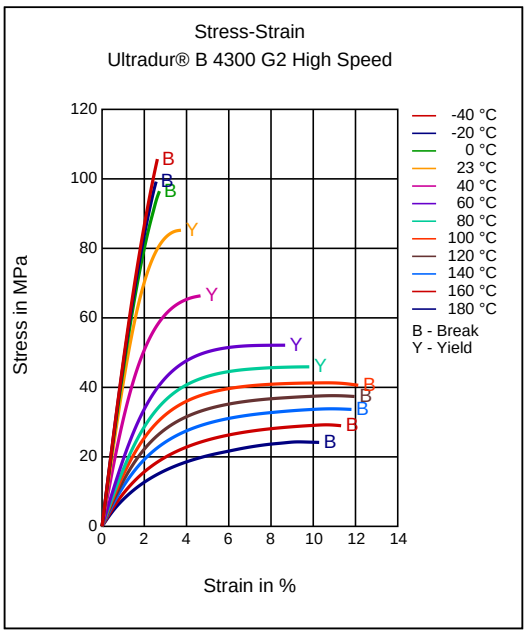
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	260	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80 - 120	°C	-

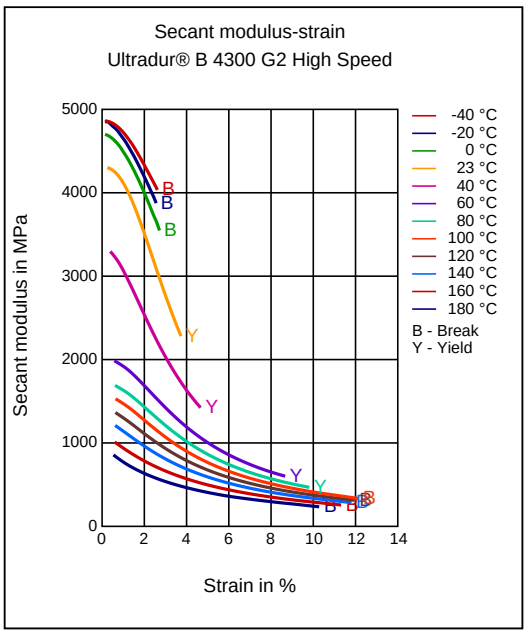
Pre-drying - Time	4	h	-
Processing humidity	≤0.04	%	-
Melt temperature	230 - 275	°C	-
Mold temperature	60 - 100	°C	-

Diagrams

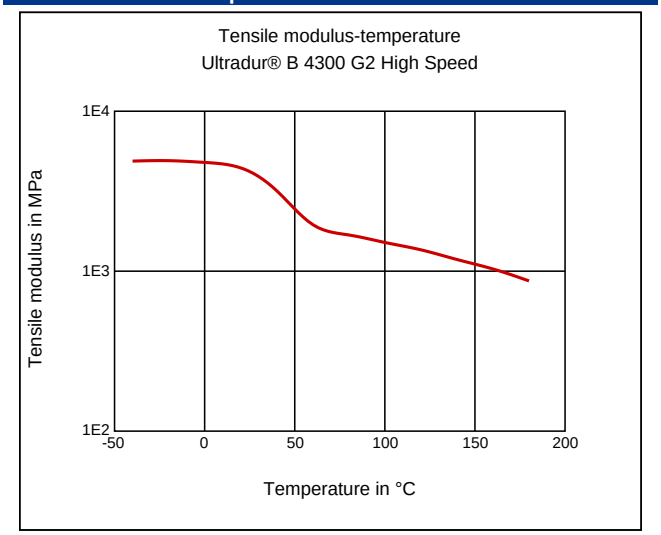
Stress-strain



Secant modulus-strain



Tensile Modulus-Temperature



Characteristics

Processing

Injection Molding

Additives

Lubricants

Delivery form

Pellets

Special Characteristics

Light stabilized or stable to light, UV stablized, Heat aging stabilized

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: 230 - 275 °C
injection molding, Melt temperature, recommended: 260 °C
injection molding, Mold temperature, range: 60 - 100 °C
injection molding, Mold temperature, recommended: 80 °C

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