

**Ultradur® B 4300 G4 High Speed**  
**PBT-GF20**

BASF

Easy flowing injection molding grade with 20 % 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-GF20

Rheological properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	22	cm³/10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	0.4	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	7000	MPa	ISO 527
Stress at Break	115	MPa	ISO 527
Strain at Break	3.3	%	ISO 527
Impact Strength (Charpy), +23°C	45	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	40	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	6	kJ/m²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Melting Temperature (10°C/min)	223	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	195	°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	30	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	145	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	-	-
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	0.8	mm	-
UL recognition	yes	-	-

Electrical Properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Relative permittivity, 100Hz	3.7	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.7	-	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
<b>ISO Data</b>			
Water Absorption	0.4	%	Sim. to ISO 62
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1450	kg/m³	ISO 1183

Material Specific Properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Viscosity number	100	cm³/g	ISO 307, 1157, 1628

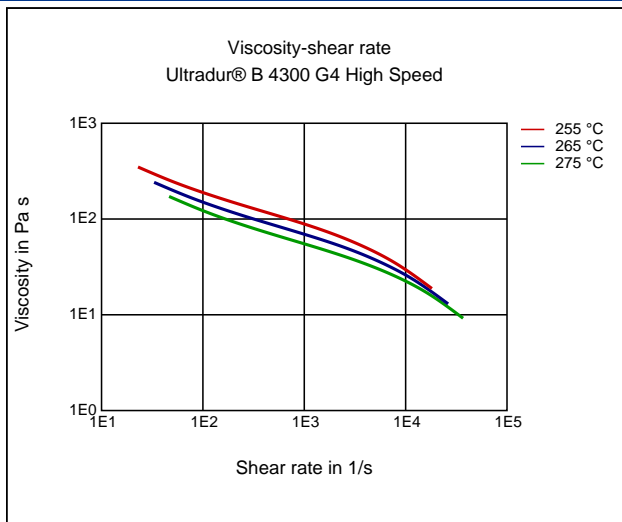
Test specimen production	Value	Unit	Test Standard
<b>ISO Data</b>			
Injection Molding, melt temperature	260	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

Injection Molding, injection velocity 200 mm/s ISO 294

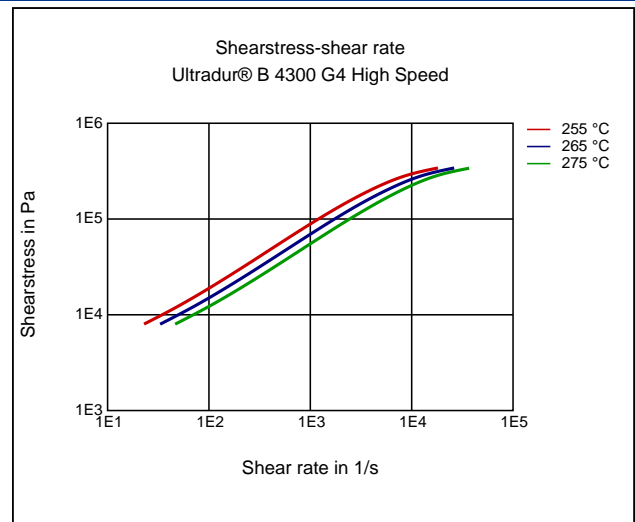
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80 - 120	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.04	%	-
Melt temperature	230 - 275	°C	-
Mold temperature	60 - 100	°C	-

## Diagrams

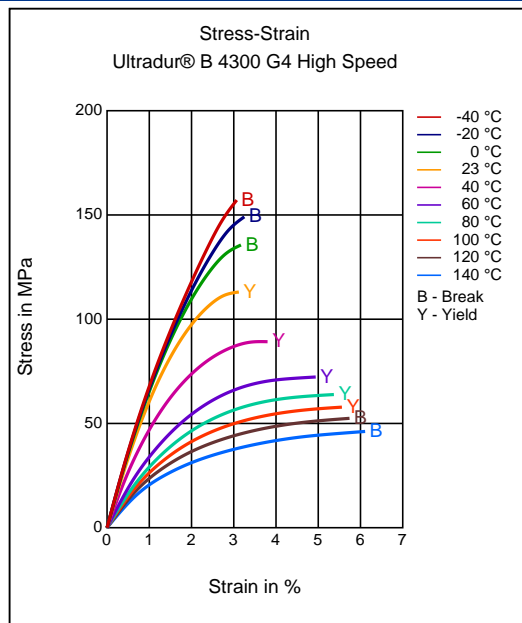
### Viscosity-shear rate



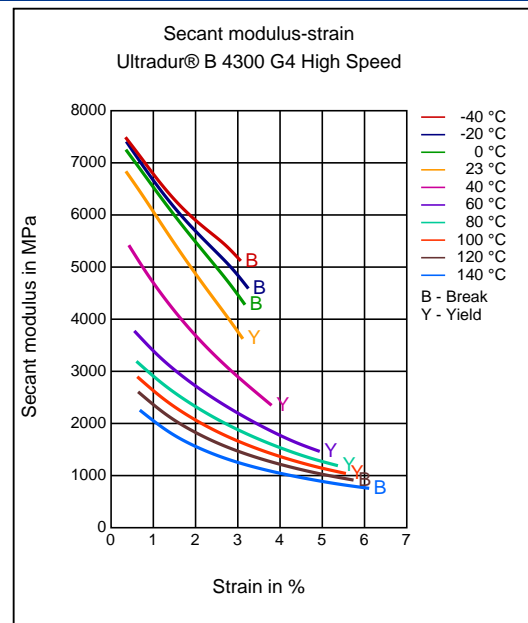
### Shearstress-shear rate



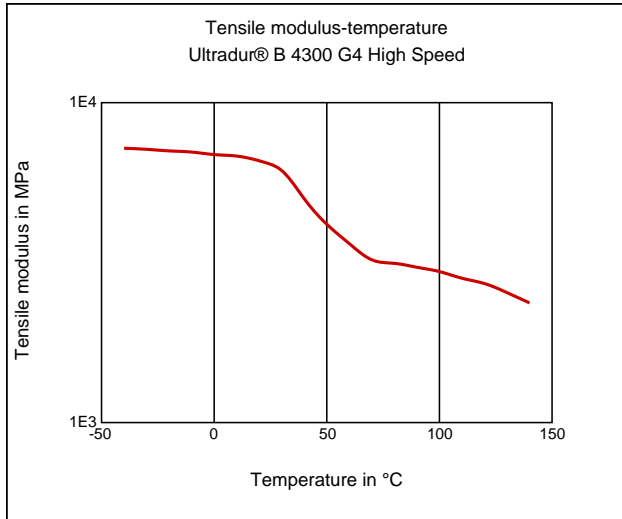
### Stress-strain



### Secant modulus-strain



### Tensile Modulus-Temperature



### Characteristics

#### Processing

Injection Molding

#### Delivery form

Pellets

#### Additives

Lubricants

#### Special Characteristics

Light stabilized or stable to light, UV stabilized, 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

### 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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