

Ultradur® B 4520 High Speed **PBT**

BASF

Easy flowing injection molding grade for connectors and other technical parts.

Abbreviated designation according to ISO 1043-1: PBT

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	50	cm³/10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2200	MPa	ISO 527
Yield stress	53	MPa	ISO 527
Yield strain	3.5	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Impact Strength (Charpy), +23°C	190	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	4	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)	55	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	130	°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	-	-
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	0.4	mm	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Electric Strength	36	kV/mm	IEC 60243-1

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.5	%	Sim. to ISO 62
Humidity absorption	0.25	%	Sim. to ISO 62
Density	1300	kg/m³	ISO 1183

Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Viscosity number	115	cm³/g	ISO 307, 1157, 1628

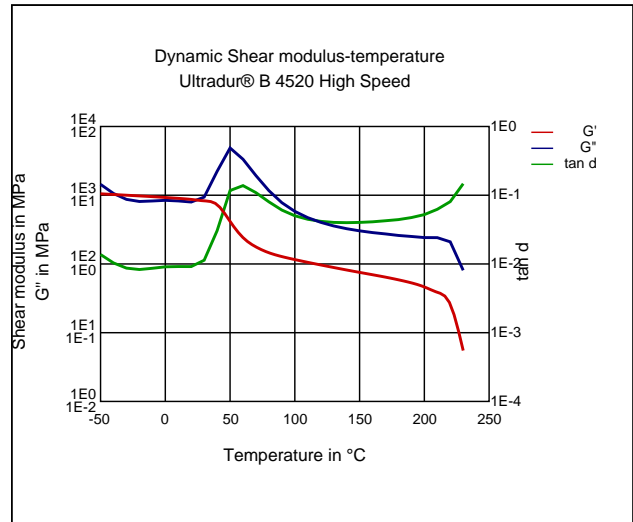
Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1060	kg/m³	-

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	240	°C	ISO 294
Injection Molding, mold temperature	60	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

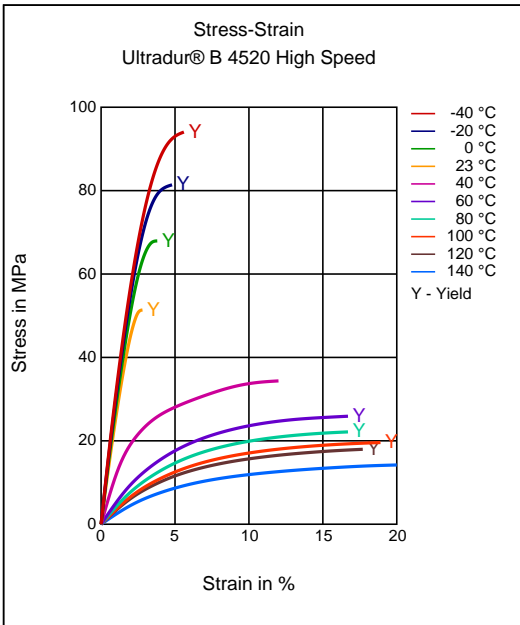
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80 - 120	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.04	%	-
Melt temperature	250 - 275	°C	-
Mold temperature	40 - 70	°C	-

Diagrams

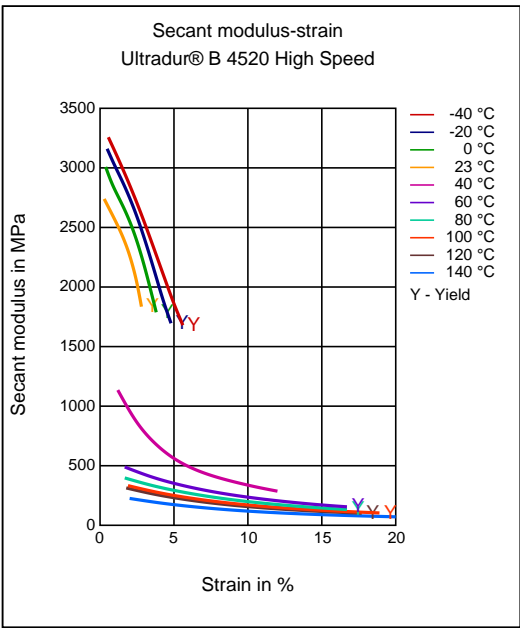
Dynamic Shear modulus-temperature



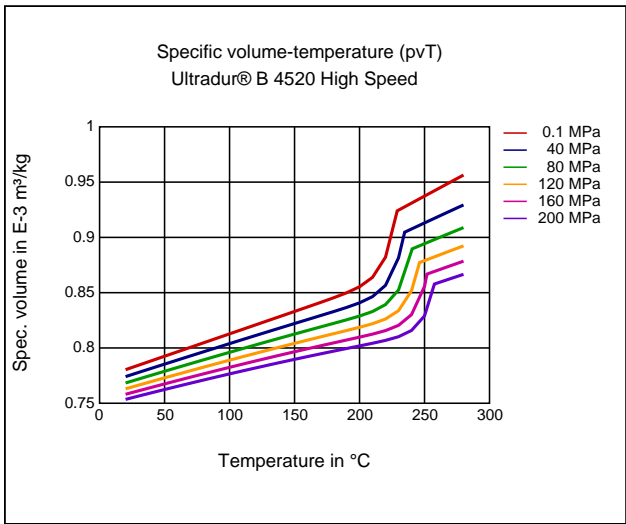
Stress-strain



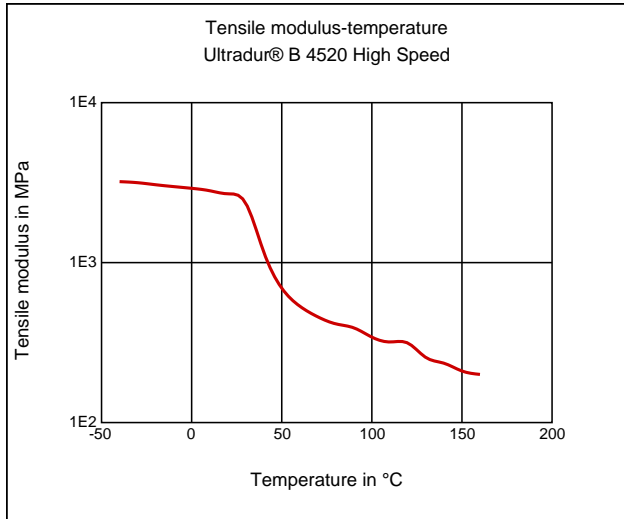
Secant modulus-strain



Specific volume-temperature (pvT)



Tensile Modulus-Temperature



Characteristics

Processing

Injection Molding

Additives

Lubricants

Delivery form

Pellets

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: 250 - 275 °C

injection molding, Melt temperature, recommended: 260 °C

injection molding, Mold temperature, range: 40 - 70 °C

injection molding, Mold temperature, recommended: 60 °C

Chemical Media Resistance

Acids

✓ Acetic Acid (5% by mass) (23 °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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