

Ultramid® Endure D5G3 BM bk20560
PA66-GF15

BASF

Glass fiber reinforced blow moulding grade with good sagging behaviour, ideal swelling and excellent heat ageing resistance up to at least 220 °C for tubes in the charge air duct mainly.

Safety data sheet ID Nr.30511131 Ultramid A Experimental Endure 1

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	4 / *	cm³/10min	ISO 1133
Temperature	275 / *	°C	-
Load	5 / *	kg	-
Molding shrinkage, parallel	1.2 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.9 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	5500 / 3270	MPa	ISO 527
Stress at Break	115 / 72.8	MPa	ISO 527
Strain at Break	5 / 15.8	%	ISO 527
Tensile Creep Modulus, 1000h	* / 2450	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	84 / 109	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	48 / 51	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	10 / 15	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	4.4 / 5.2	kJ/m²	ISO 179/1eA

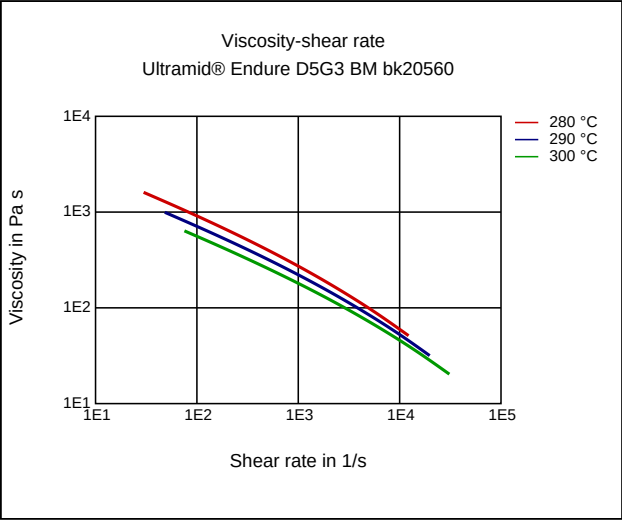
Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	260 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	220 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	250 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	44 / *	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	107 / *	E-6/K	ISO 11359-1/-2

Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Humidity absorption	1.85 / *	%	Sim. to ISO 62
Density	1230 / -	kg/m³	ISO 1183

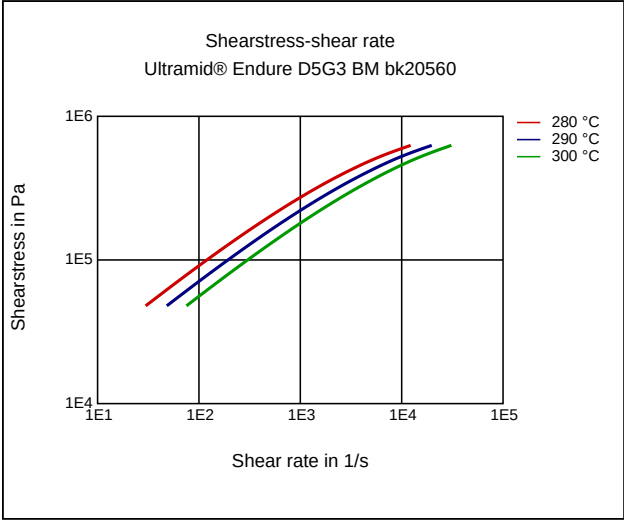
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.05	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	60 - 90	°C	-

Diagrams

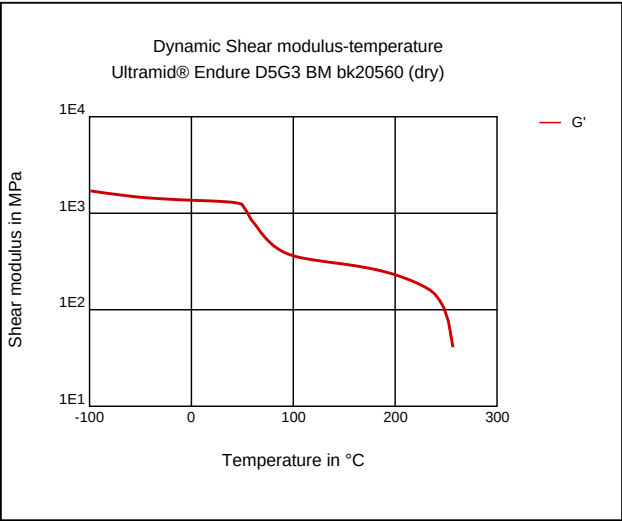
Viscosity-shear rate



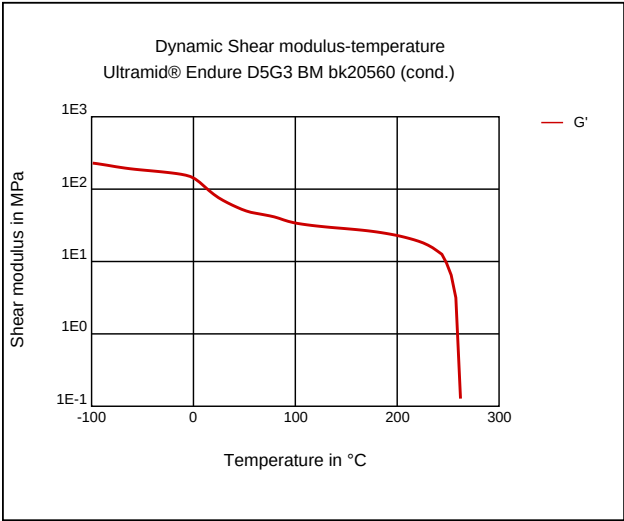
Shearstress-shear rate



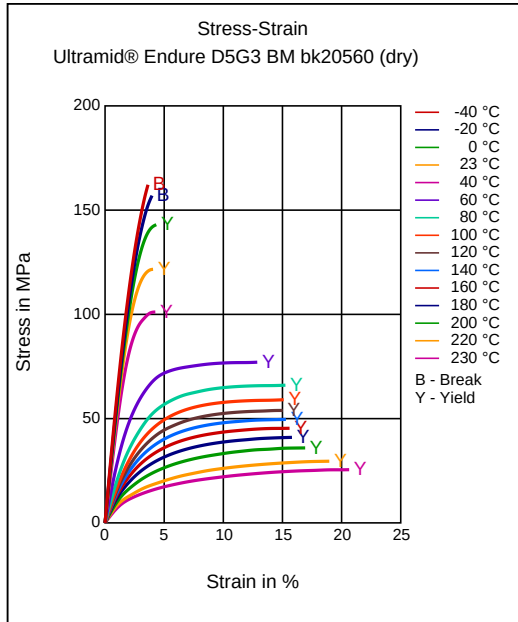
Dynamic Shear modulus-temperature



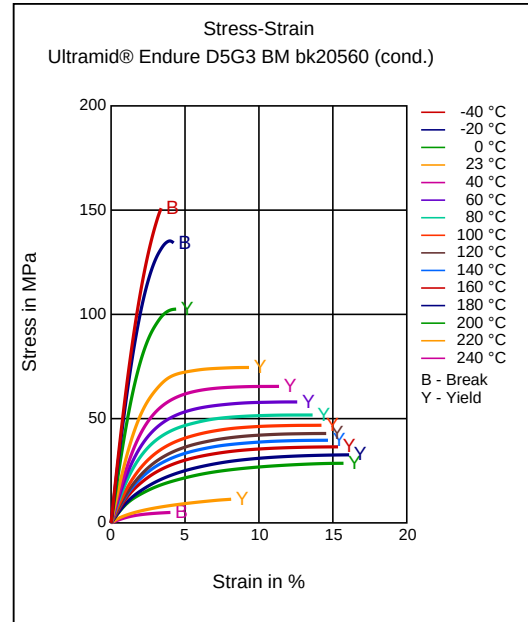
Dynamic Shear modulus-temperature



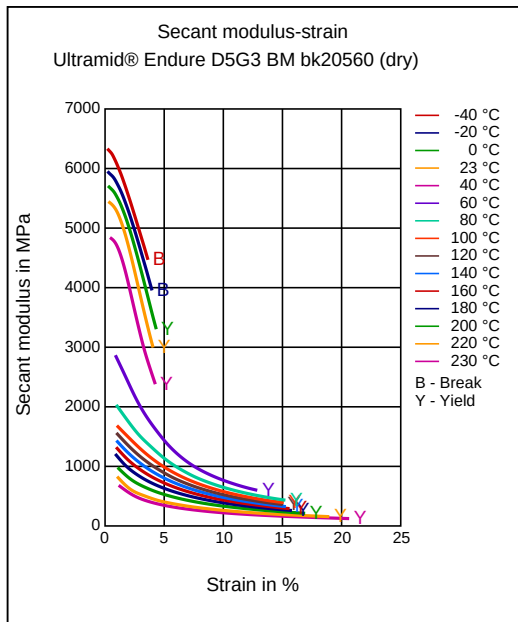
Stress-strain



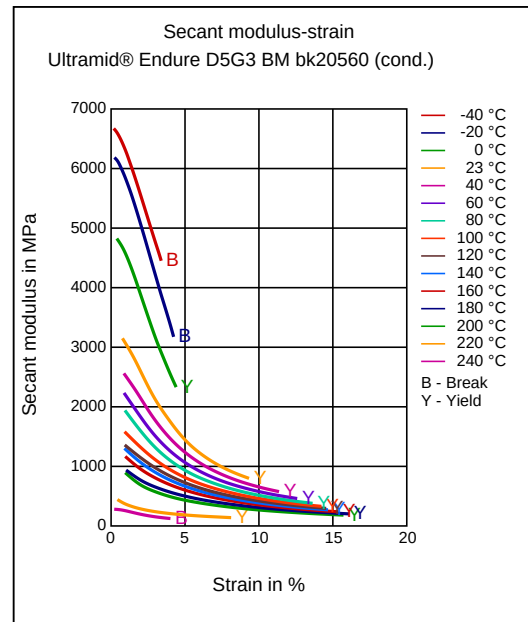
Stress-strain



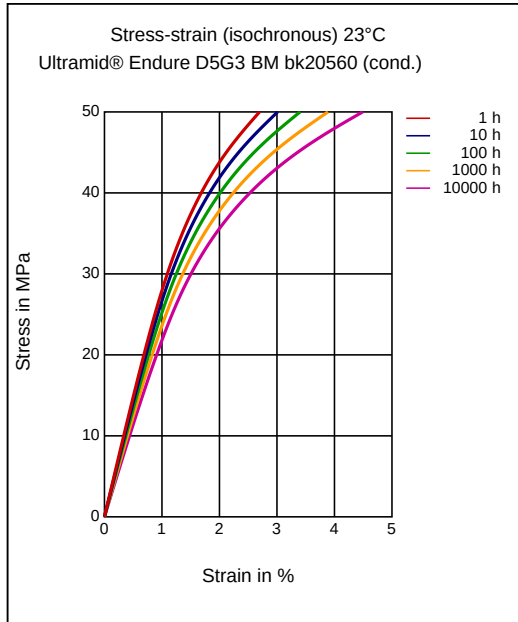
Secant modulus-strain



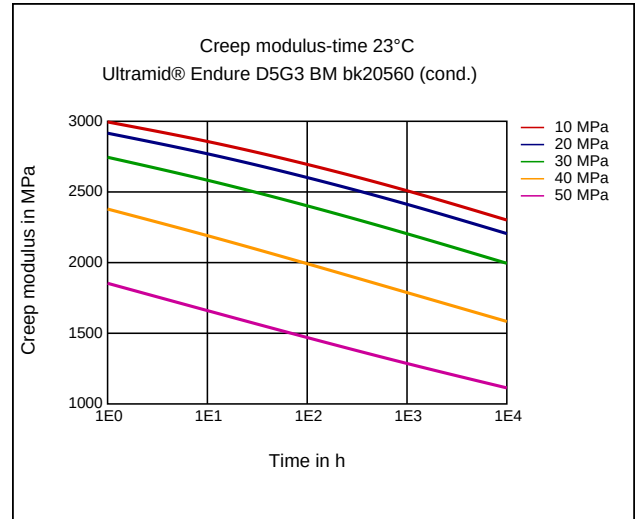
Secant modulus-strain



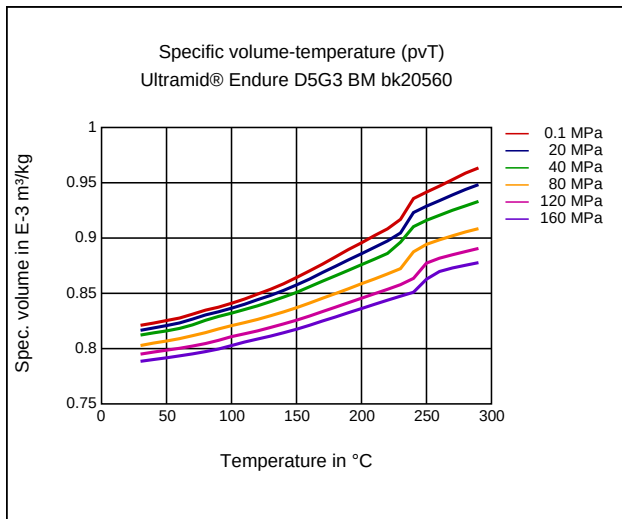
Stress-strain (isochronous) 23°C



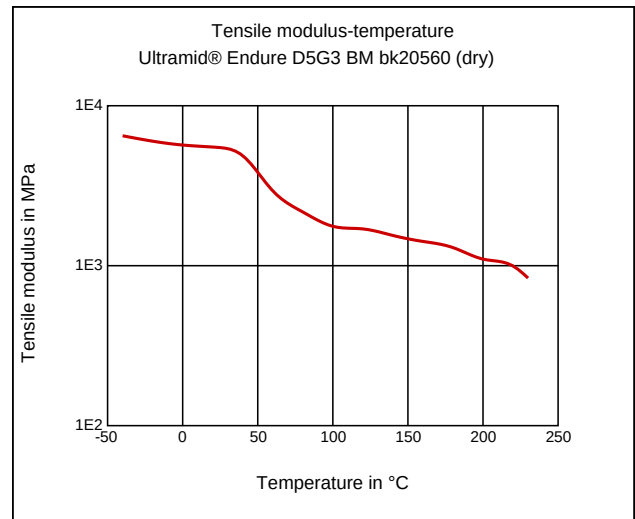
Creep modulus-time 23°C



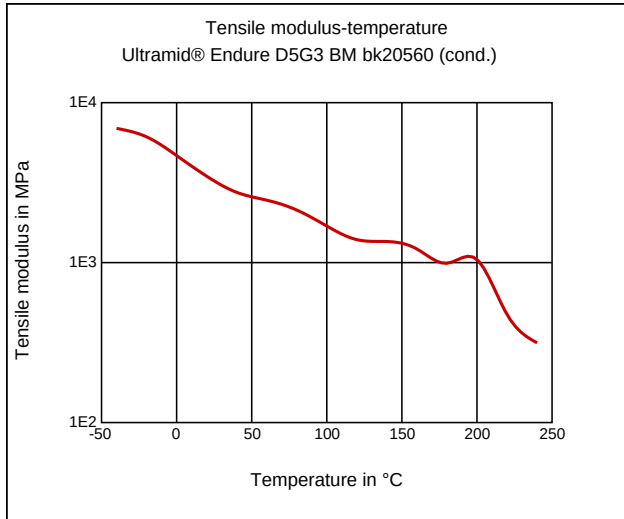
Specific volume-temperature (pvT)



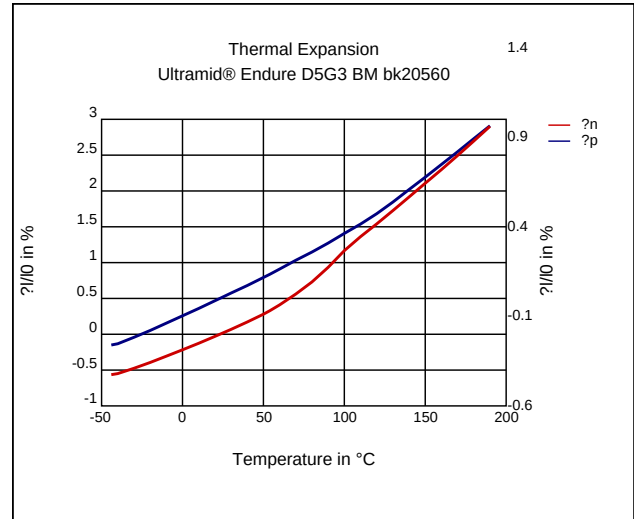
Tensile Modulus-Temperature



Tensile Modulus-Temperature



Coeff. of linear thermal expansion, normal



Characteristics

Processing

Other Extrusion, Blow Molding

Delivery form

Pellets, Black

Injection Molding

PREPROCESSING

Pre/Post-processing, max. allowed water content: .05 %

Pre/Post-processing, Pre-drying, Temperature: 80 °C

Pre/Post-processing, Pre-drying, Time: 4 h

PROCESSING

injection molding, Melt temperature, recommended: 270 - 290 °C

injection molding, Mold temperature, range: 60 - 90 °C

injection molding, Dwell time, thermoplastics: 5 min

Special Characteristics

Heat aging stabilized

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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