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

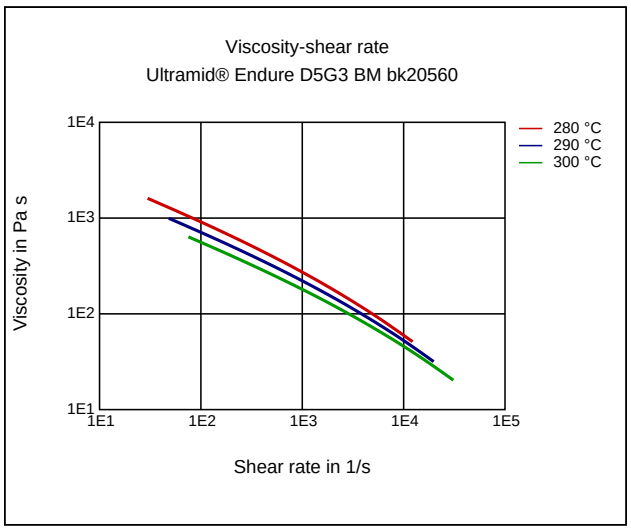
Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	260 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	220 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	250 / *	°C	ISO 75-1/-2
Coeff. of Linear Therm. Expansion, parallel	44 / *	E-6/K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

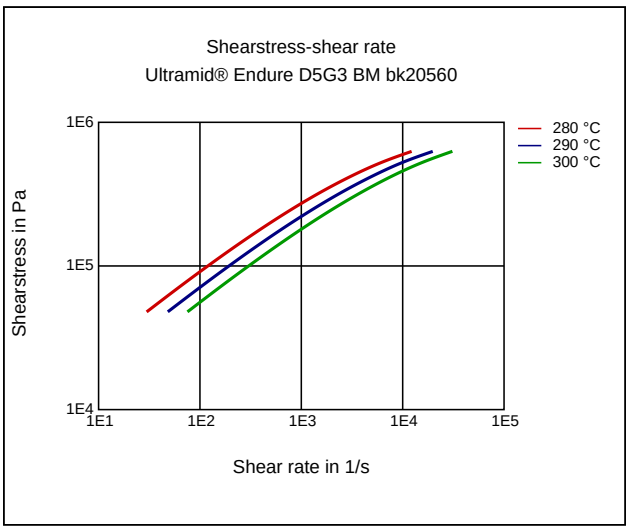
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.05	%	-
Melt temperature	270 - 290	°C	-
Mold temperature	60 - 90	°C	-

Diagrams

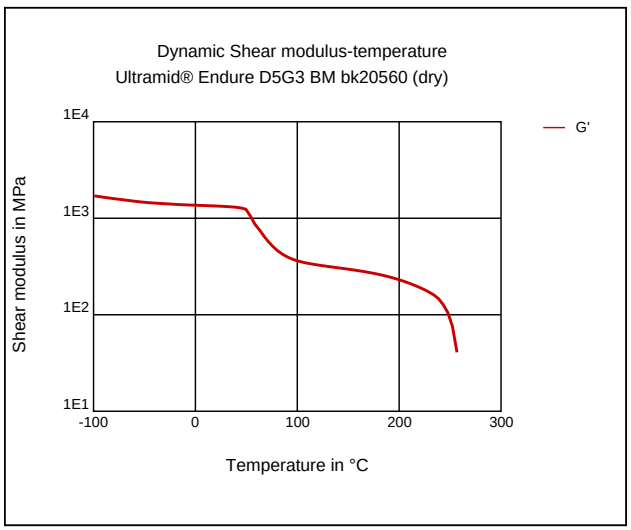
Viscosity-shear rate



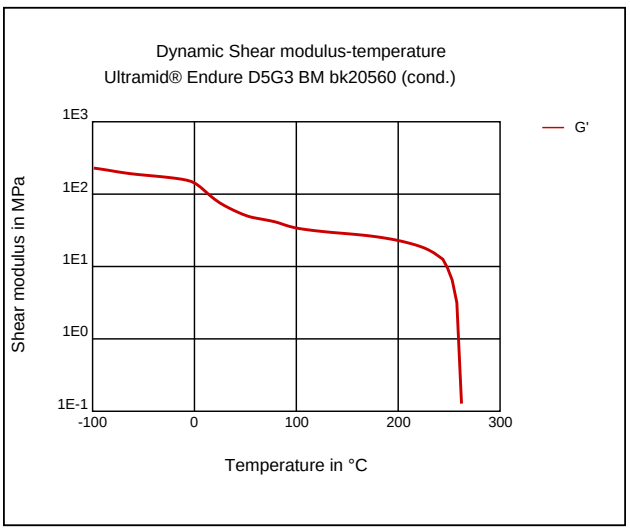
Shearstress-shear rate



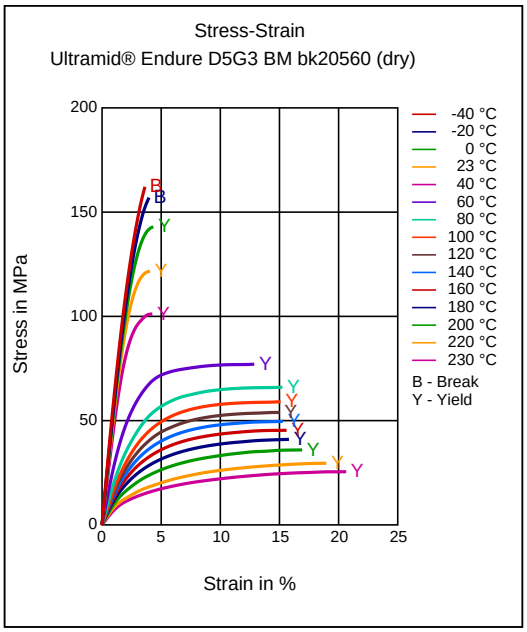
Dynamic Shear modulus-temperature



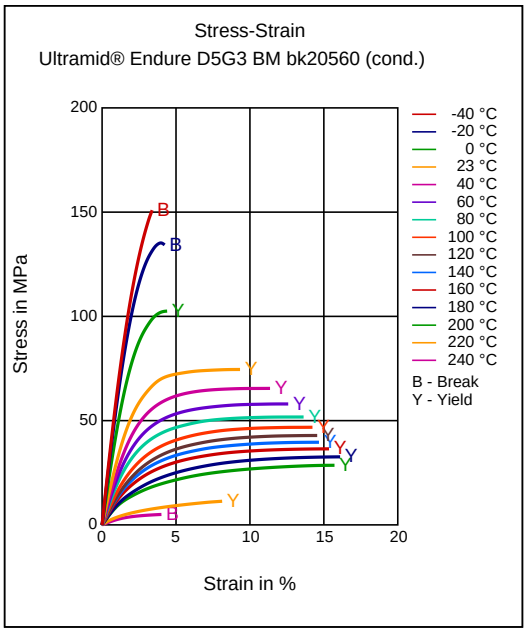
Dynamic Shear modulus-temperature



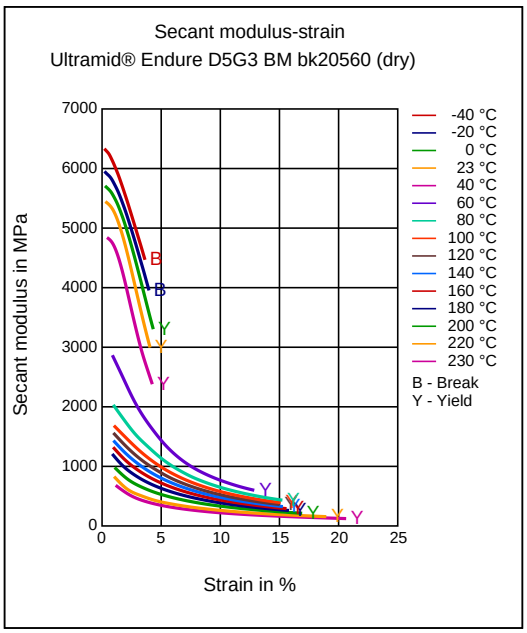
Stress-strain



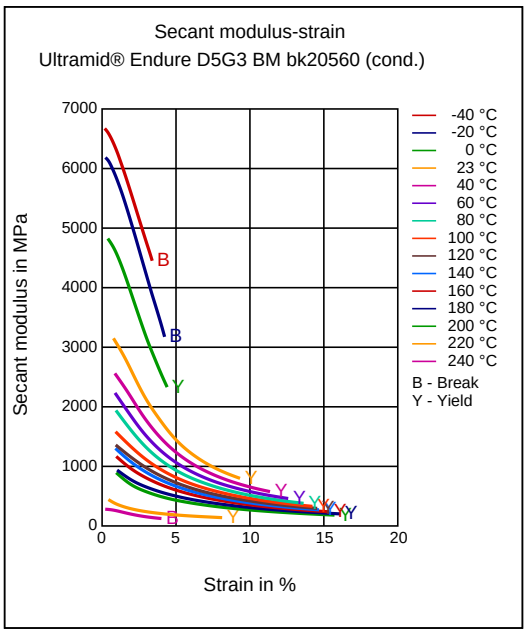
Stress-strain



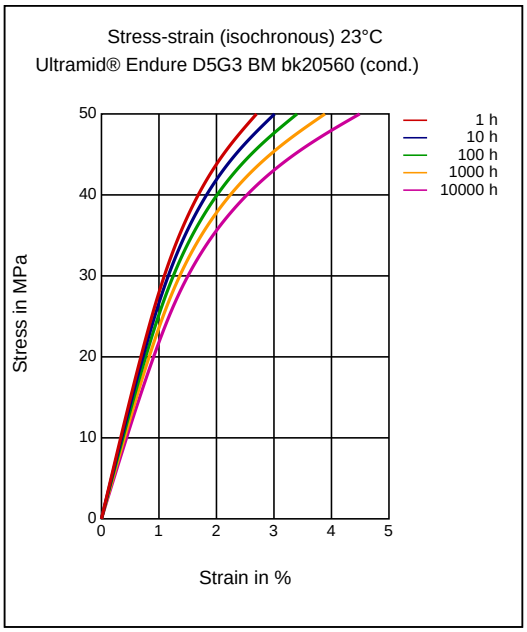
Secant modulus-strain



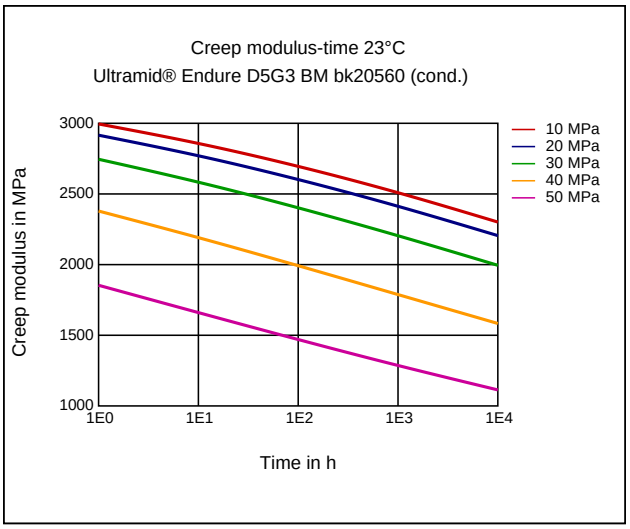
Secant modulus-strain



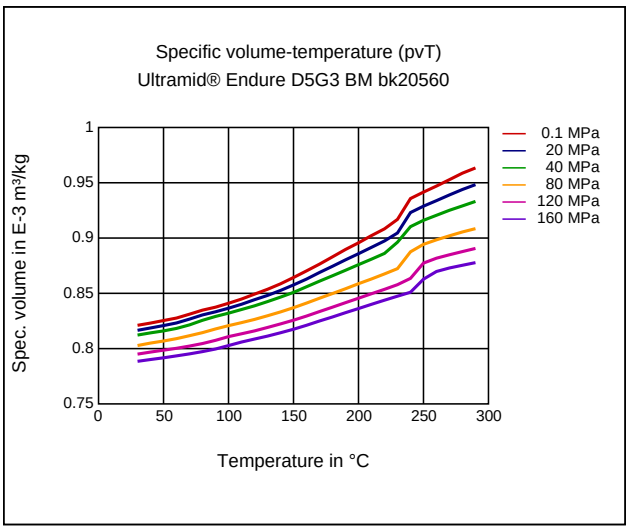
Stress-strain (isochronous) 23 °C



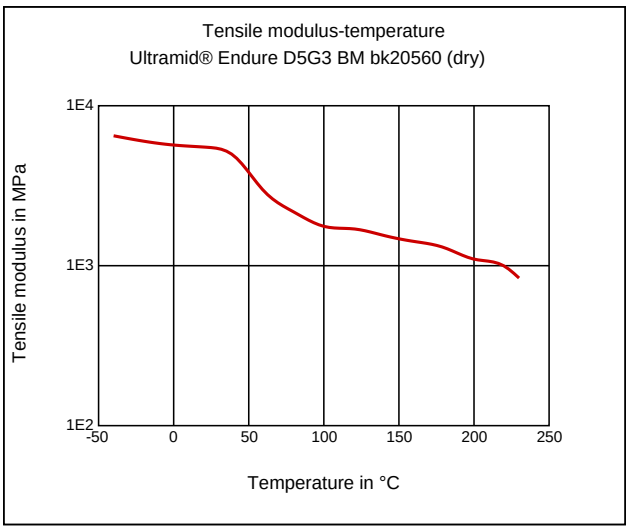
Creep modulus-time 23 °C



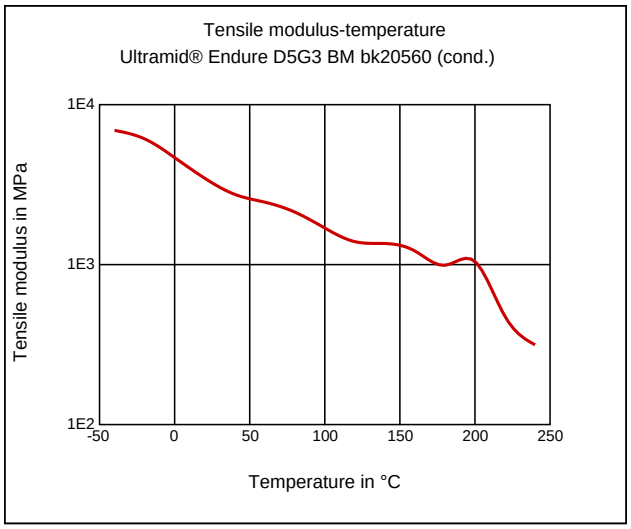
Specific volume-temperature (pvT)



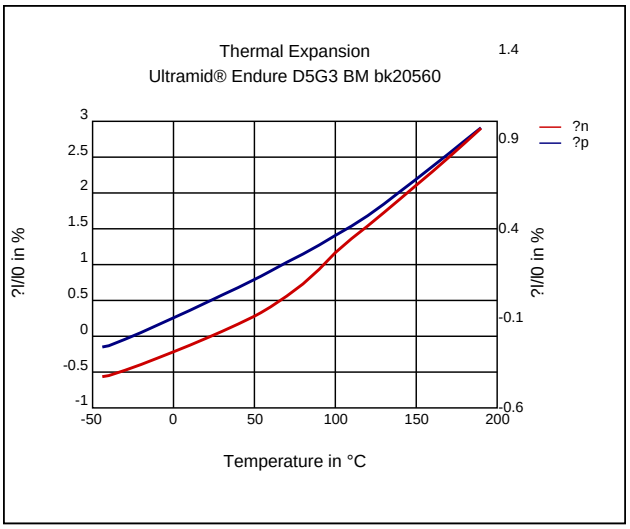
Tensile Modulus-Temperature



Tensile Modulus-Temperature



Coeff. of linear thermal expansion, normal



Characteristics

Processing
Other Extrusion, Blow Molding

Special Characteristics
Heat aging stabilized

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

Disclaimer