INEOS Styrolution

Terluran® GP-22

ABS — INEOS Styrolution

Easy-flow, general purpose injection moulding grade with high resistance to impact and heat distortion; intended for a wide range of applications, particularly in the housings sector.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	19	cm³/10min	ISO 1133
Temperature	220	°C	-
Load	10	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2300	MPa	ISO 527
Yield stress	45	MPa	ISO 527
Yield strain	2.6	%	ISO 527
Nominal strain at break	10	%	ISO 527
Impact Strength (Charpy), +23°C	180	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	100	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	22	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	8	kJ/m²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	94	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	99	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	96	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	95	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	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	2.9	-	IEC 62631-2-1
Relative permittivity, 1MHz	2.8	-	IEC 62631-2-1
Dissipation Factor, 100Hz	48	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	79	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	41	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	1	%	Sim. to ISO 62
Humidity absorption	0.22	%	Sim. to ISO 62
Density	1040	kg/m³	ISO 1183

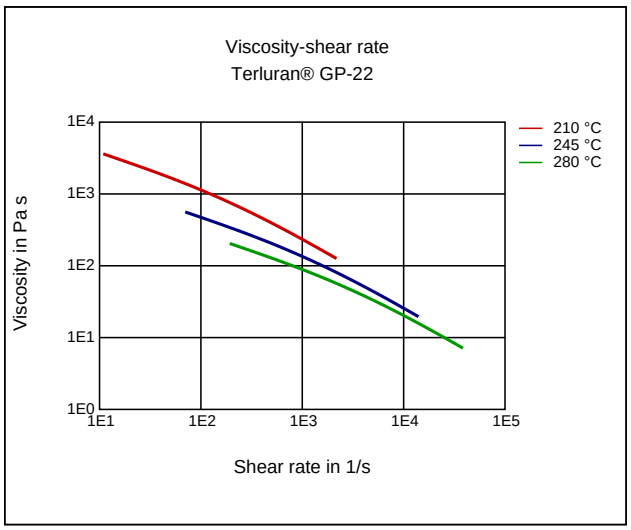
Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	930	kg/m³	-
Thermal Conductivity of Melt	0.16	W/(m K)	-
Spec. heat capacity of melt	2400	J/(kg K)	-
Ejection temperature	93	°C	-

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	250	°C	ISO 294
Injection Molding, mold temperature	60	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

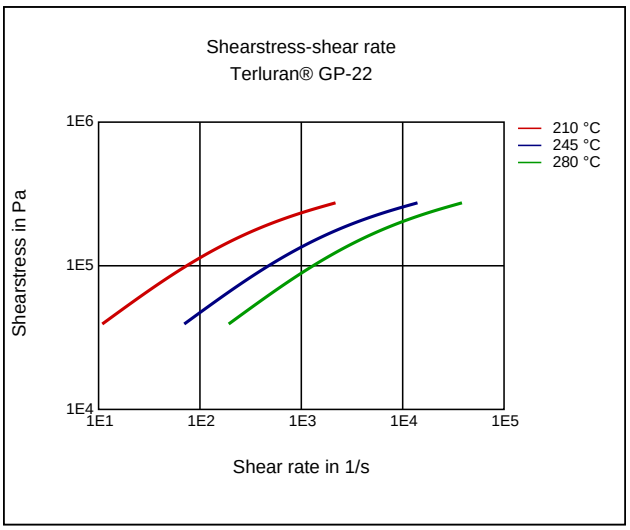
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	220 - 260	°C	-
Mold temperature	30 - 60	°C	-

Diagrams

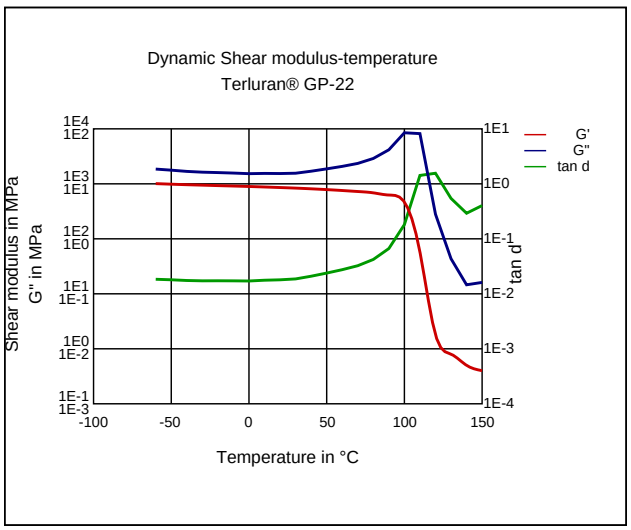
Viscosity-shear rate



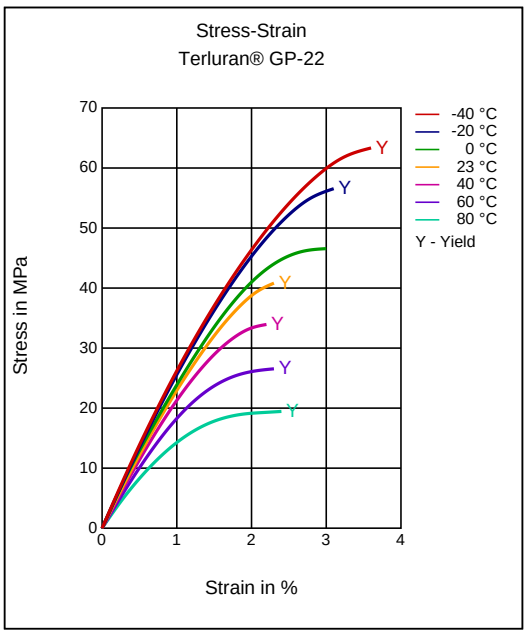
Shearstress-shear rate



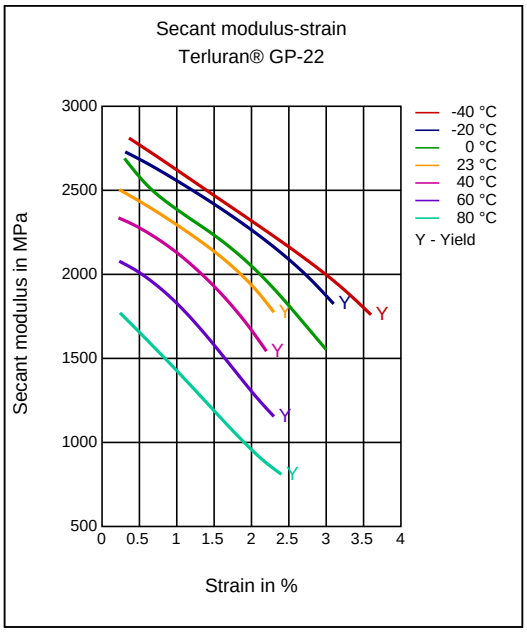
Dynamic Shear modulus-temperature



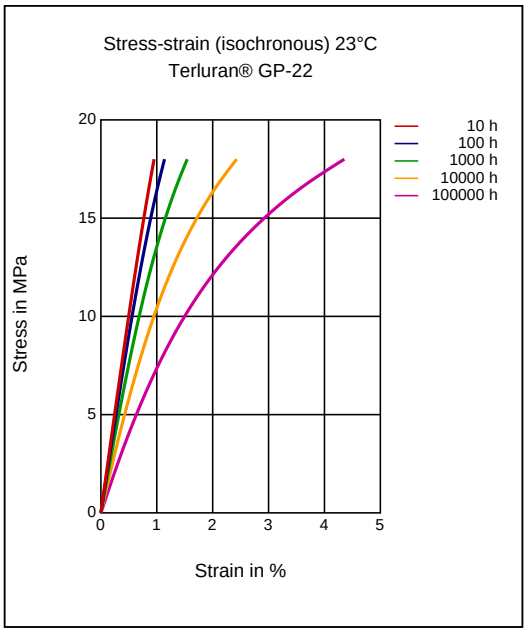
Stress-strain



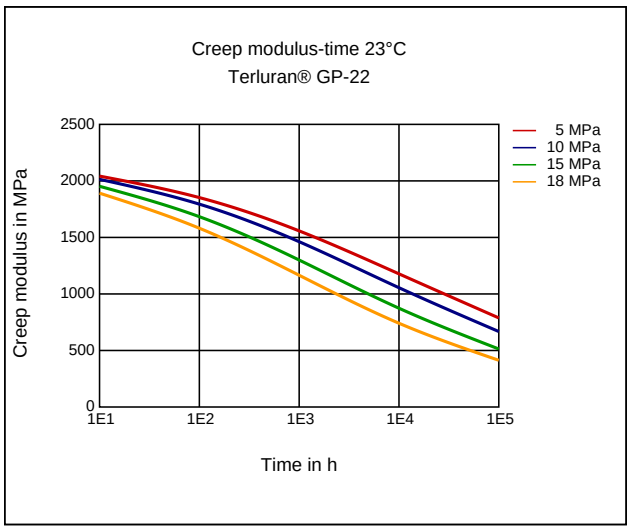
Secant modulus-strain



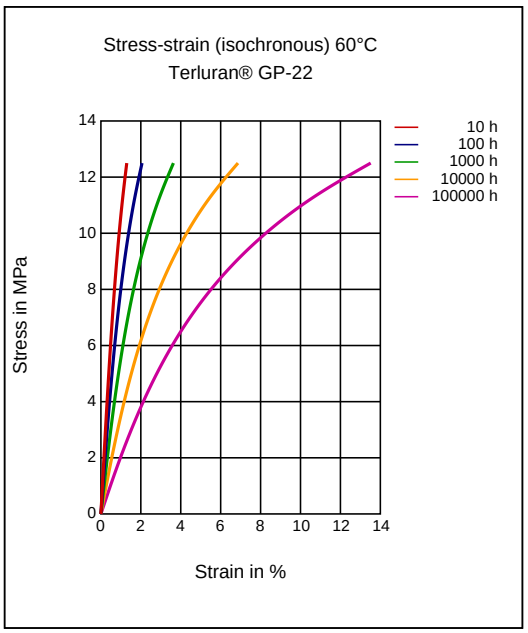
Stress-strain (isochronous) 23 °C



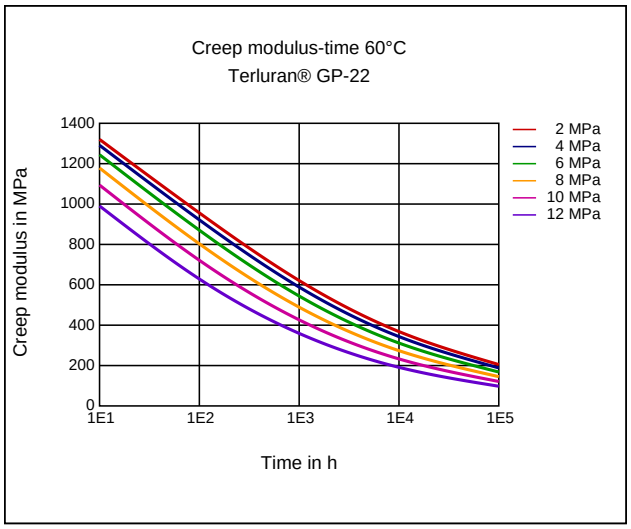
Creep modulus-time 23 °C



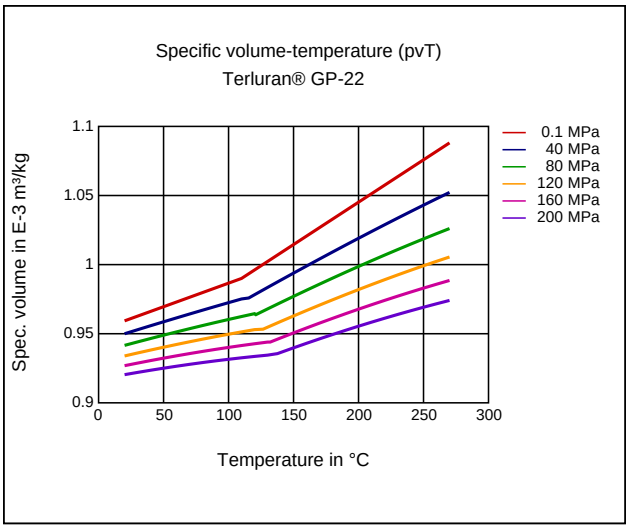
Stress-strain (isochronous) 60 °C



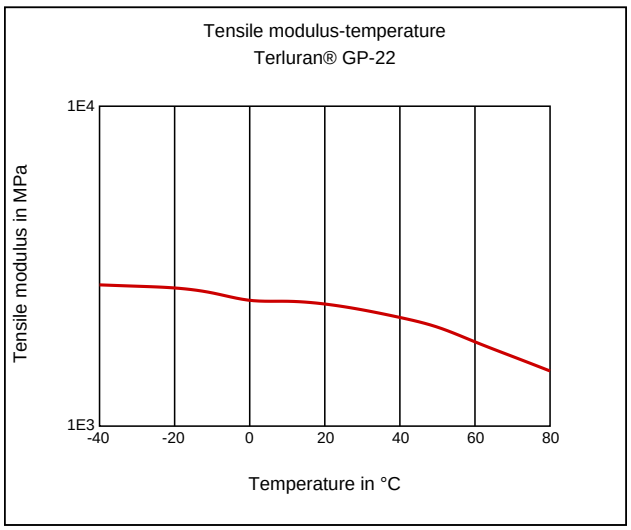
Creep modulus-time 60 °C



Specific volume-temperature (pvT)



Tensile Modulus-Temperature



Characteristics

Processing
Injection Molding

Special Characteristics
Platable

Delivery form
Pellets

Injection Molding

PREPROCESSING
Pre/Post-processing, Pre-drying, Temperature: 80 °C
Pre/Post-processing, Pre-drying, Time: 2 - 4 h

PROCESSING
injection molding, Melt temperature, range: 220 - 260 °C
injection molding, Melt temperature, recommended: 250 °C
injection molding, Mold temperature, range: 30 - 60 °C
injection molding, Mold temperature, recommended: 50 °C

Disclaimer

Liability Exclusion
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