INEOS Styrolution

ALBIS

Terluran® GP-35

ABS — INEOS Styrolution

Terluran® GP-35 is a high-flow, general purpose injection molding grade with good ductility, intended for moldings with thin walls and/or adverse flow length to wall ratio.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	34	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	44	MPa	ISO 527
Yield strain	2.4	%	ISO 527
Nominal strain at break	12	%	ISO 527
Impact Strength (Charpy), +23°C	125	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	90	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	19	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	7	kJ/m²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	92	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	95	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	95	°C	ISO 306
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	3.0	mm	-
UL recognition	yes	-	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	1E13	Ohm	IEC 62631-3-2

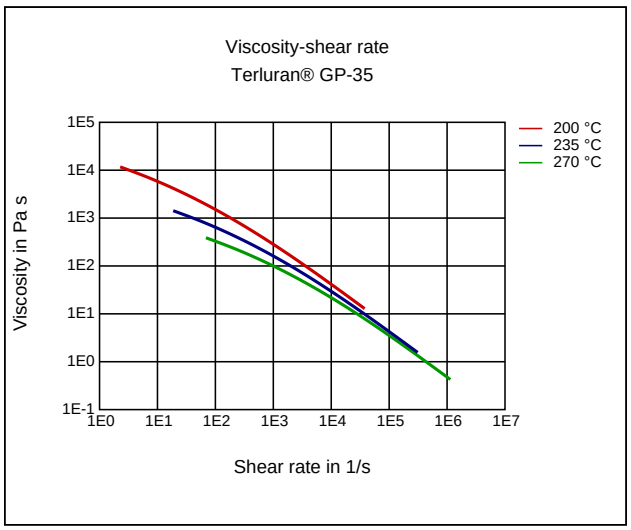
Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.95	%	Sim. to ISO 62
Humidity absorption	0.24	%	Sim. to ISO 62
Density	1040	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	934	kg/m³	-
Thermal Conductivity of Melt	0.18	W/(m K)	-
Spec. heat capacity of melt	2300	J/(kg K)	-
Ejection temperature	84	°C	-

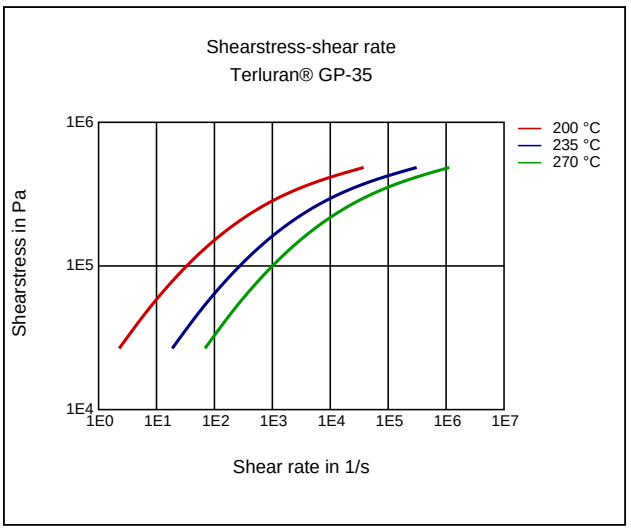
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	220 - 260	°C	-
Mold temperature	30 - 60	°C	-

Diagrams

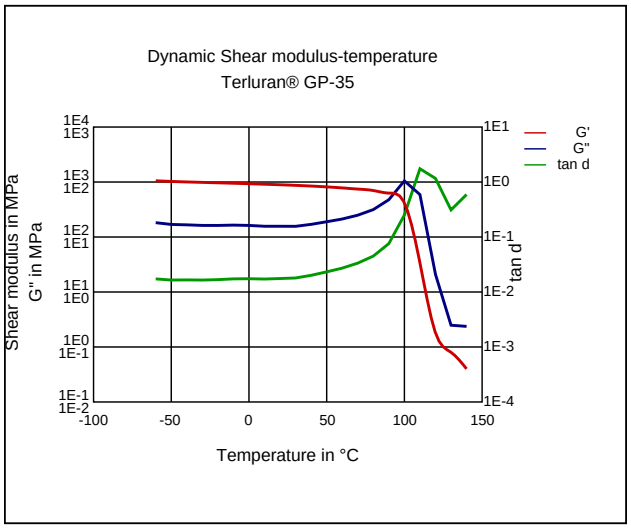
Viscosity-shear rate



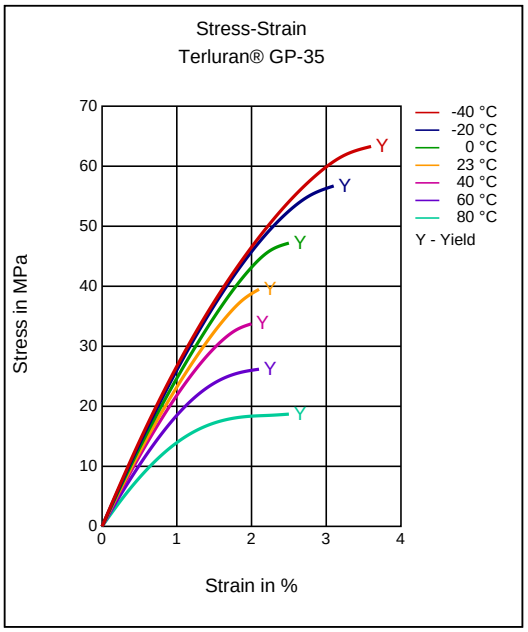
Shearstress-shear rate



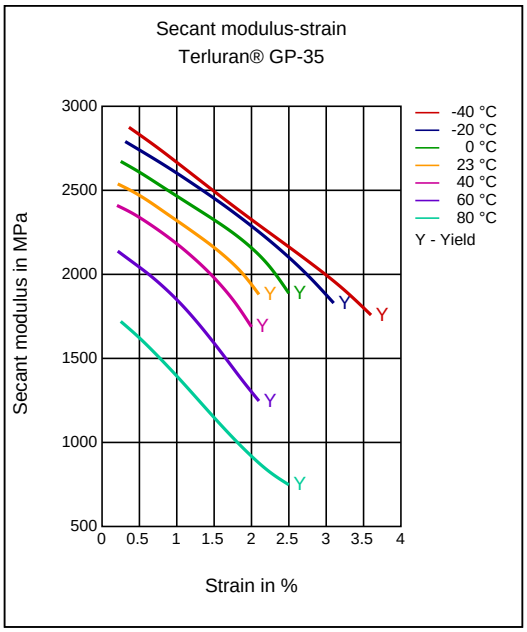
Dynamic Shear modulus-temperature



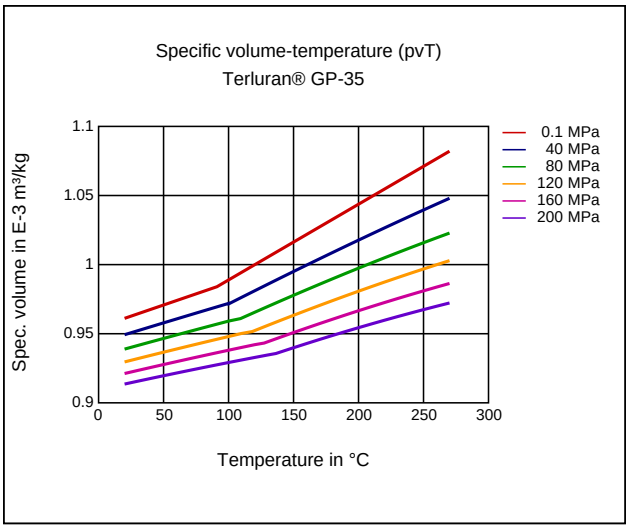
Stress-strain



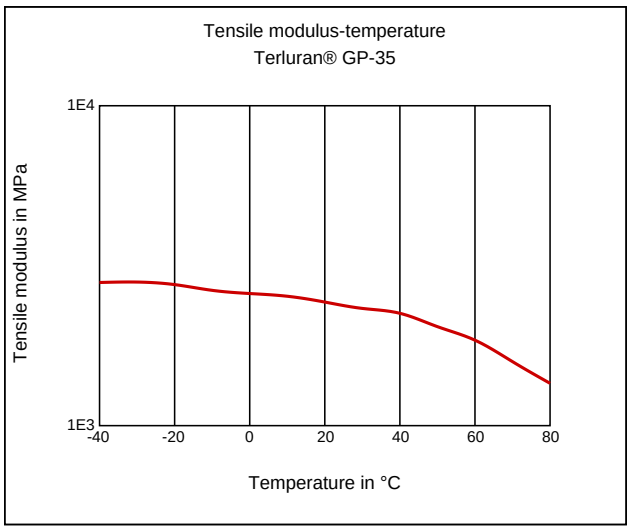
Secant modulus-strain



Specific volume-temperature (pvT)



Tensile Modulus-Temperature



Characteristics

Processing
Injection Molding

Additives
Lubricants

Delivery form
Pellets

Special Characteristics
Platable

Injection Molding

PREPROCESSING

Pre-drying, Temperature: 80 °C

Pre-drying, Time: 2 - 4h

PROCESSING

Melt temperature, range: 220 - 260 °C

Mold temperature, range: 30 - 80 °C

Chemical Media Resistance

Acids

- ✔ Acetic Acid (5% by mass) (23°C)
- ✔ Citric Acid solution (10% by mass) (23°C)
- ✔ Lactic Acid (10% by mass) (23°C)
- ✔ Hydrochloric Acid (36% by mass) (23°C)
- ✔ Sulfuric Acid (38% by mass) (23°C)
- ✔ Sulfuric Acid (5% by mass) (23°C)
- ✔ Chromic Acid solution (40% by mass) (23°C)

Bases

- ✔ Sodium Hydroxide solution (35% by mass) (23°C)
- ✔ Sodium Hydroxide solution (1% by mass) (23°C)
- ✔ Ammonium Hydroxide solution (10% by mass) (23°C)

Alcohols

- ✔ Methanol (23°C)
- ✔ Ethanol (23°C)

Hydrocarbons

- ✔ iso-Octane (23°C)

Standard Fuels

- ✔ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)

Salt solutions

- ✔ Sodium Chloride solution (10% by mass) (23°C)
- ✔ Sodium Hypochlorite solution (10% by mass) (23°C)
- ✔ Sodium Carbonate solution (20% by mass) (23°C)
- ✔ Sodium Carbonate solution (2% by mass) (23°C)
- ✔ Zinc Chloride solution (50% by mass) (23°C)

Other

- ✔ Hydrogen peroxide (23°C)
- ✔ 1% nonylphenoxy-polyethyleneoxy ethanol in water (23°C)
- ✔ Water (23°C)

Disclaimer

- any critical component in any medical device that supports or sustains human life.

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