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INEOS Styrolution

ALBIS

Terluran ECO® GP-35 BC100

ABS — INEOS Styrolution

Terluran® ECO GP-35 BC100 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. Terluran® ECO GP-35 BC100 is a complete bio-attributed solution with bio-attributed content from all three monomers (styrene monomer, butadiene, and acrylonitrile). The use of renewable feedstock brings significant product carbon footprint savings. Terluran® ECO GP-35 BC100 is produced according to an ISCC-certified mass balance approach, and has identical physical and mechanical properties as its fossil-based counterpart. All the same regulatory documents are also available.

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
Flexural strength	65	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	22	kJ/m²	ISO 180/1A
Notched Impact Strength (Izod)	7	kJ/m²	ISO 180/1A
Temperature	-30	°C	-
Ball Indentation Hardness	99	MPa	ISO 2039-1

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	-	-
ASTM Data			
Thermal Conductivity, solid state	0.17	W/(m K)	ISO 22007-4

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
Bulk density	600	kg/m³	-

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	-

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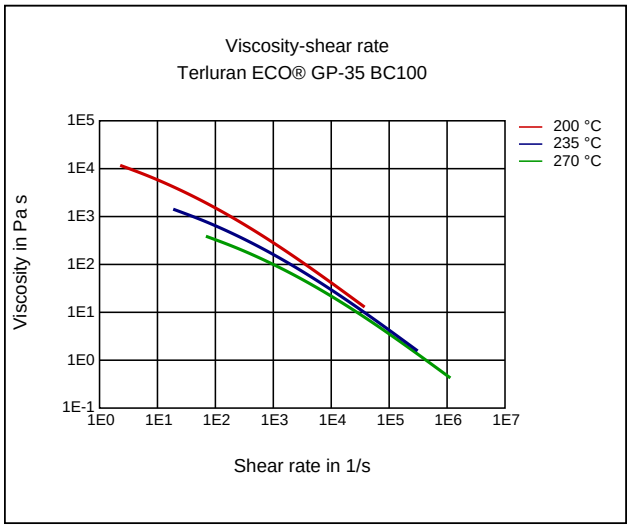
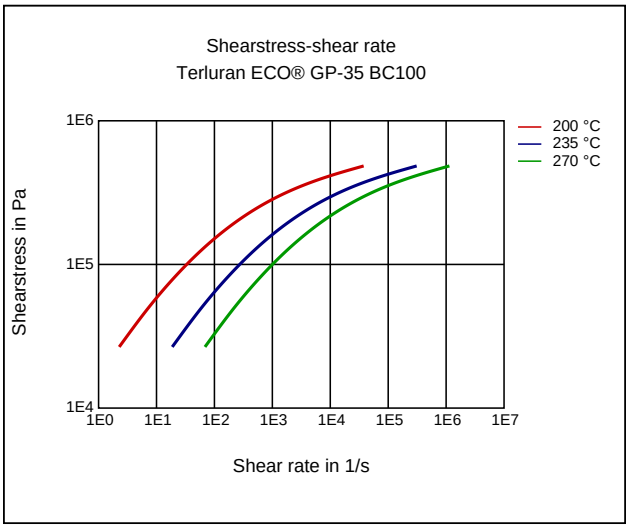
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	220 - 260	°C	-
Mold temperature	30 - 80	°C	-
Injection speed	200	mm/s	-

Diagrams

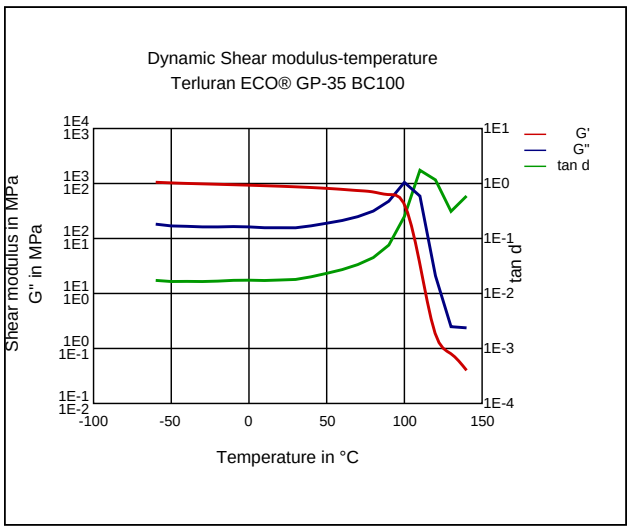
Viscosity-shear rate



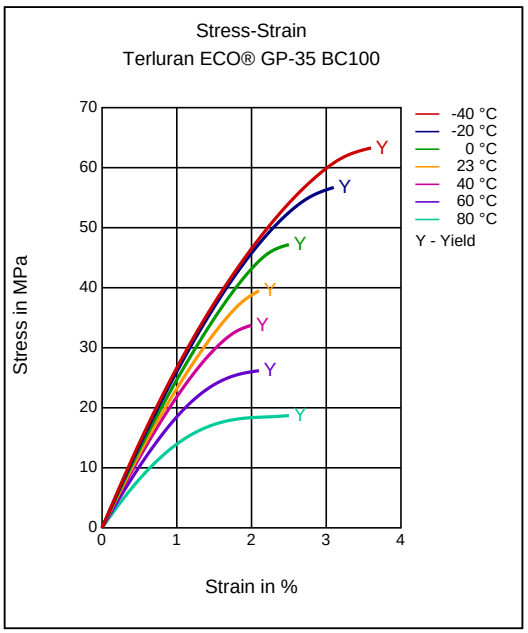
Shearstress-shear rate



Dynamic Shear modulus-temperature



Stress-strain



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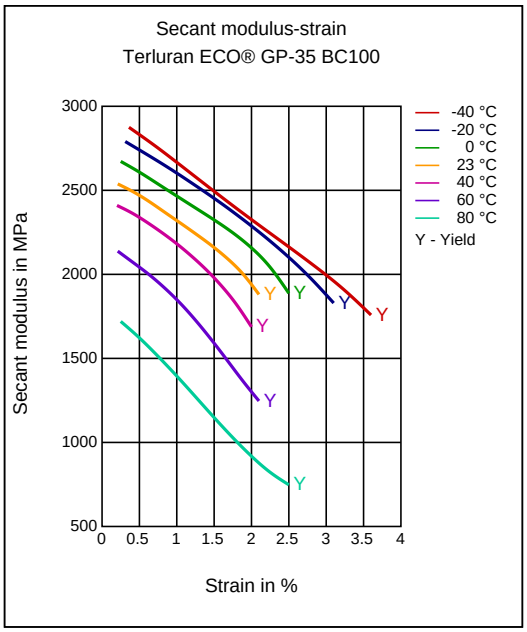
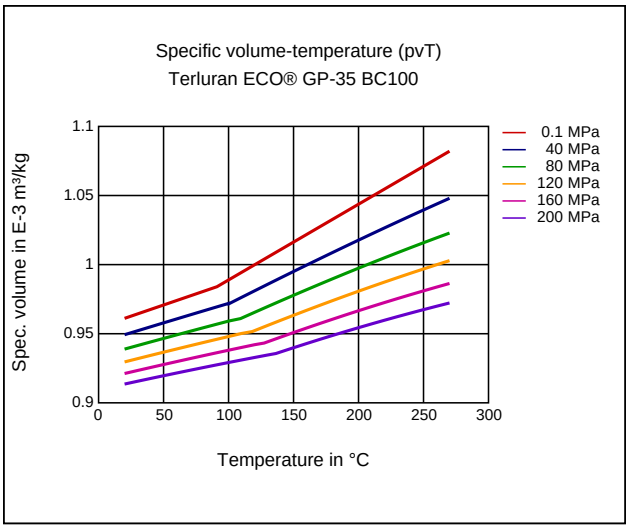
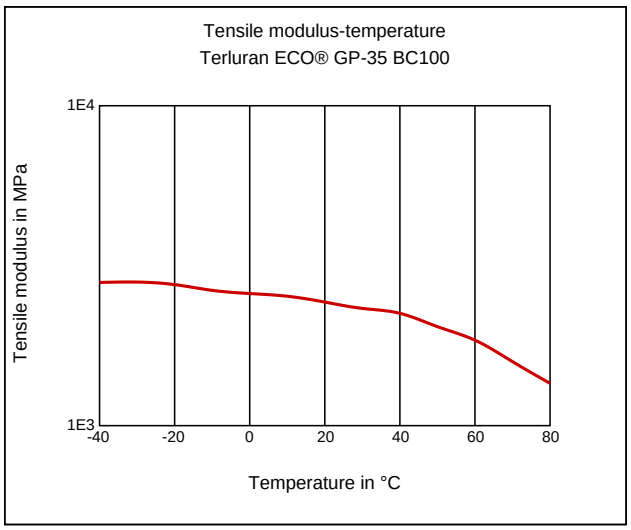
Secant modulus-strain



Specific volume-temperature (pvT)



Tensile Modulus-Temperature



Characteristics

Processing
Injection Molding

Delivery form
Pellets

Additives
Lubricants

Special Characteristics
Platable, Impact modified, Heat aging stabilized

Features
Ductile, High Gloss

Certifications
Contains renewable resources, ISCC Plus

Applications
Automotive, Electrical and Electronical, General Purpose

Injection Molding
PREPROCESSING

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ABS INEOS Styrolution

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)