

Luran® ECO 368R BC70

SAN

INEOS Styrolution

Luran® ECO 368R BC70 is a general purpose grade of SAN with well-balanced properties, suitable for injection molding and extrusion. It features very good transparency, good heat resistance and very good dimensional stability. Luran® ECO 368R BC70 is an ISCC compliant product leading to a substitution of fossil source styrene with ISCC certified bio-attributed styrene.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	10	cm ³ /10min	ISO 1133
Temperature	220	°C	-
Load	10	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3700	MPa	ISO 527
Stress at Break	75	MPa	ISO 527
Strain at Break	3	%	ISO 527
Impact Strength (Charpy), +23°C	18	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	18	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	2	kJ/m ²	ISO 179/1eA
Flexural Modulus (23°C)	3540	MPa	ISO 178
Flexural strength	125	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	2	kJ/m ²	ISO 180/1A
Ball Indentation Hardness	165	MPa	ISO 2039-1

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	100	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	100	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	106	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	70	E-6/K	ISO 11359-1/-2
ASTM Data			
Thermal Conductivity, solid state	0.17	W/(m K)	DIN 52612-1

Other Properties	Value	Unit	Test Standard
ISO Data			
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1080	kg/m ³	ISO 1183
Bulk density	600	kg/m ³	-

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Thermal Conductivity of Melt	0.17	W/(m K)	-

Optical Properties	Value	Unit	Test Standard
ASTM Data			
Haze	1	%	ASTM D 1003
Light Transmittance	89	%	ASTM D 1003
Index of Refraction	1.57	-	ISO 489

Test specimen production	Value	Unit	Test Standard
ISO Data			
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	40 - 80	°C	-
Injection speed	200	mm/s	-

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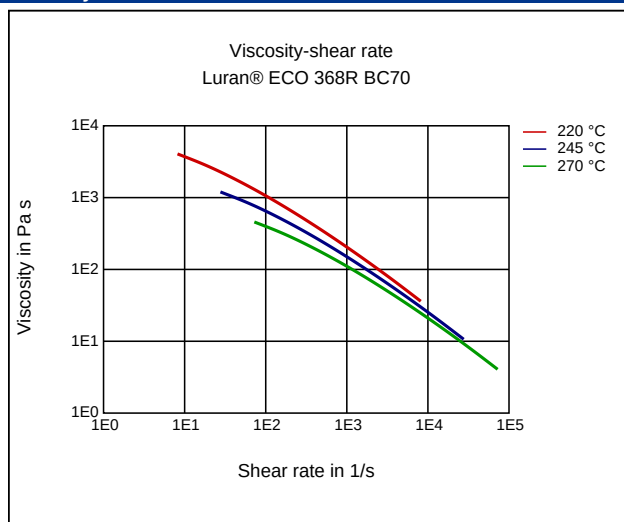
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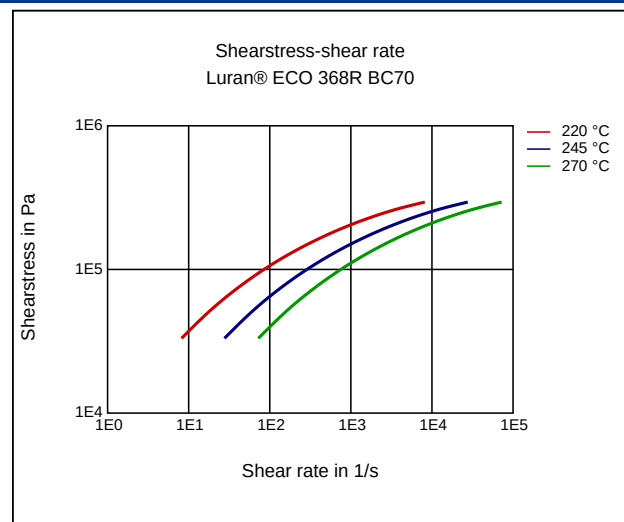
Processing Recommendation Extrusion	Value	Unit	Test Standard
Type of extrusion	profile	-	-
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	240	°C	-
Type of extrusion	sheet	-	-
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	220 - 240	°C	-

Diagrams

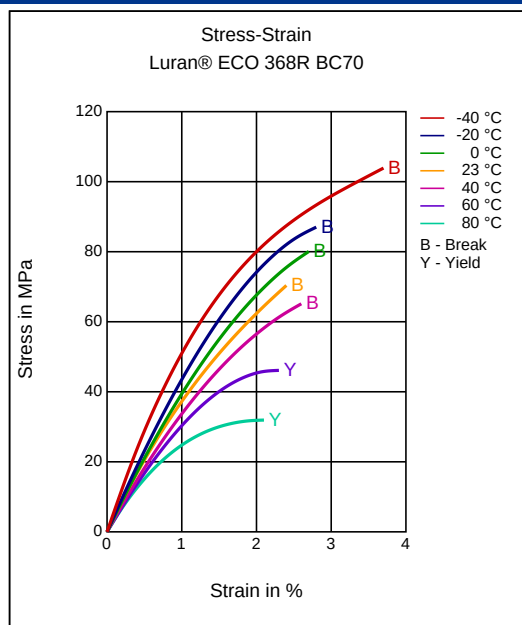
Viscosity-shear rate



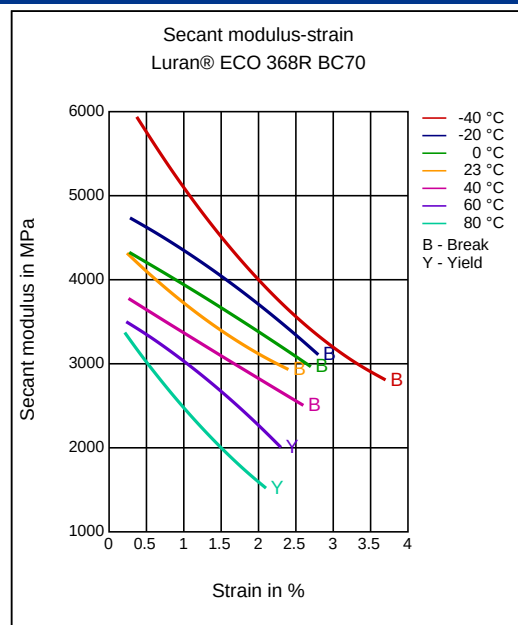
Shearstress-shear rate



Stress-strain



Secant modulus-strain

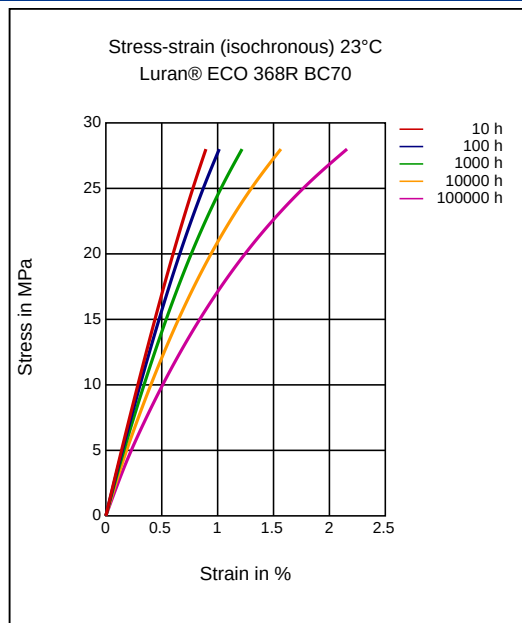


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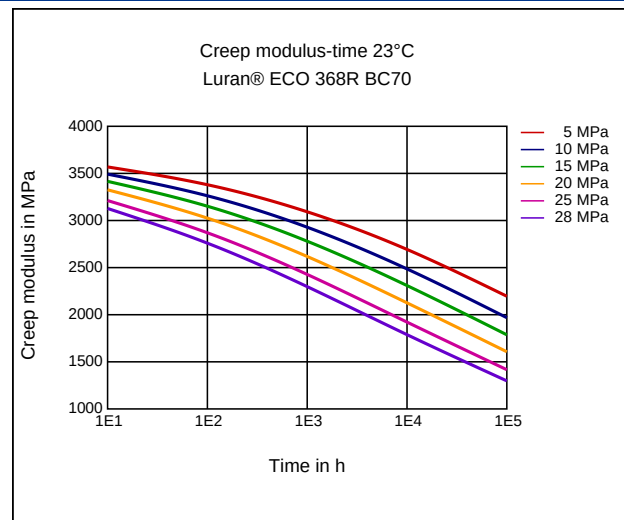
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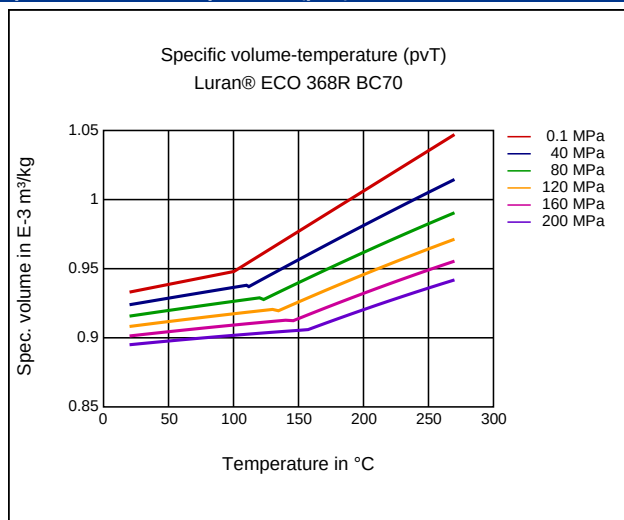
Stress-strain (isochronous) 23°C



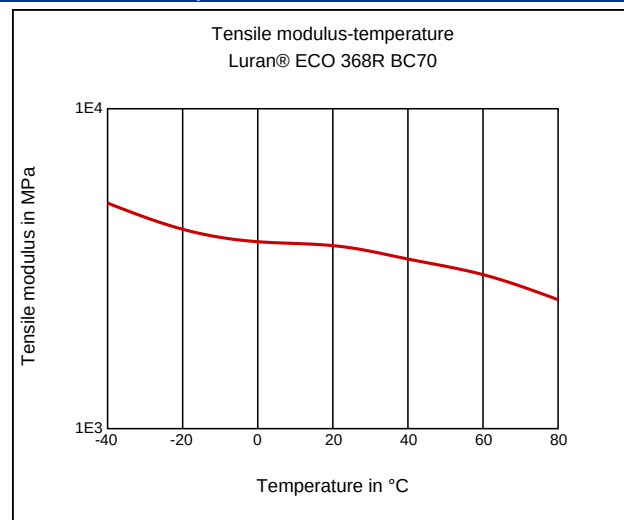
Creep modulus-time 23°C



Specific volume-temperature (pvT)



Tensile Modulus-Temperature



Characteristics

Processing

Injection Molding, Profile Extrusion, Sheet Extrusion, Other Extrusion, Thermoforming

Delivery form

Pellets

Special Characteristics

Heat aging stabilized, Transparent

Chemical Resistance

General Chemical Resistance

Certifications

Contains renewable resources, Food approval, ISCC Plus

Applications

General Purpose, Packaging

Injection Molding

PREPROCESSING

Pre-drying, Temperature: 80°C

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Pre-drying, Time: 2 - 4h

PROCESSING

Melt temperature, range: 220 - 260 °C

Mold temperature, range: 40 - 80 °C

Other Extrusion

PREPROCESSING

Pre-drying, Temperature: 80 °C

Pre-drying, Time: 2 - h

PROCESSING

Prepreg, Melt temperature: 220 - 240 °C

Pipes, Melt temperature: 220 - 240 °C

Profile extrusion

PREPROCESSING

Pre-drying, Temperature: 80 °C

Pre-drying, Time: 2 - 4h

PROCESSING

Profiles, Melt temperature: 240 °C

Sheet Extrusion

PREPROCESSING

Pre-drying, Temperature: 80 °C

Pre-drying, Time: 2 - 4h

PROCESSING

Plates, Melt temperature: 220 - 240 °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)

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- ✓ 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)
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