

Luran® ECO 388S BC60

SAN

INEOS Styrolution

Luran® ECO 388S BC60 is a specialty grade of SAN with enhanced chemical resistance and the highest mechanical strength. It is suitable for injection molding and extrusion applications. Luran® ECO 388S BC60 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	7	cm ³ /10min	ISO 1133
Temperature	220	°C	-
Load	10	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3800	MPa	ISO 527
Stress at Break	79	MPa	ISO 527
Strain at Break	4	%	ISO 527
Impact Strength (Charpy), +23°C	21	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	19	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	2.5	kJ/m ²	ISO 179/1eA
Flexural Modulus (23°C)	3670	MPa	ISO 178
Flexural strength	140	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	2.5	kJ/m ²	ISO 180/1A
Ball Indentation Hardness	175	MPa	ISO 2039-1

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	101	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	102	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	107	°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	0.3	%	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	1.56	-	ISO 489

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	-

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	-

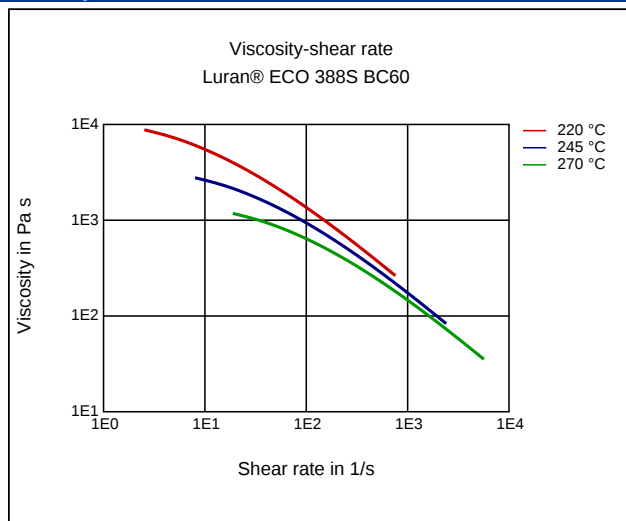
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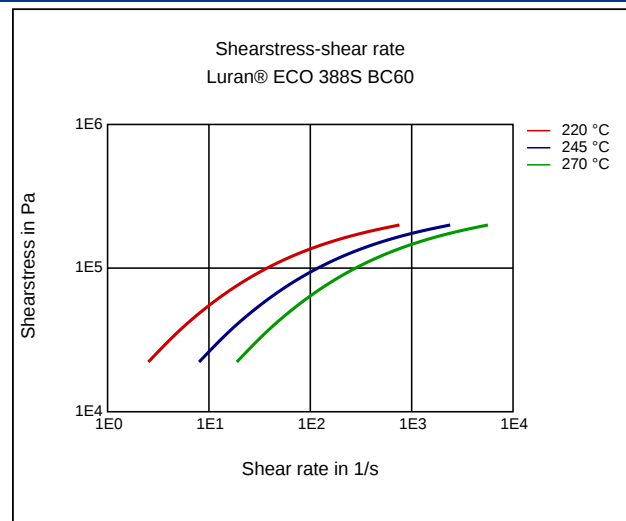
Type of extrusion	sheet	-	-
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	220 - 240	°C	-

Diagrams

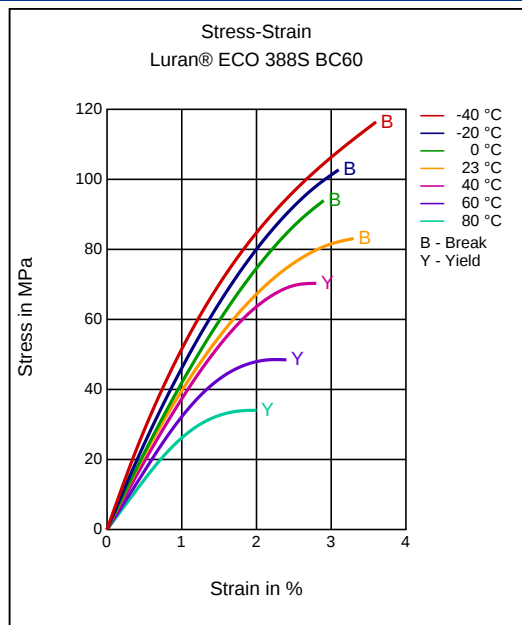
Viscosity-shear rate



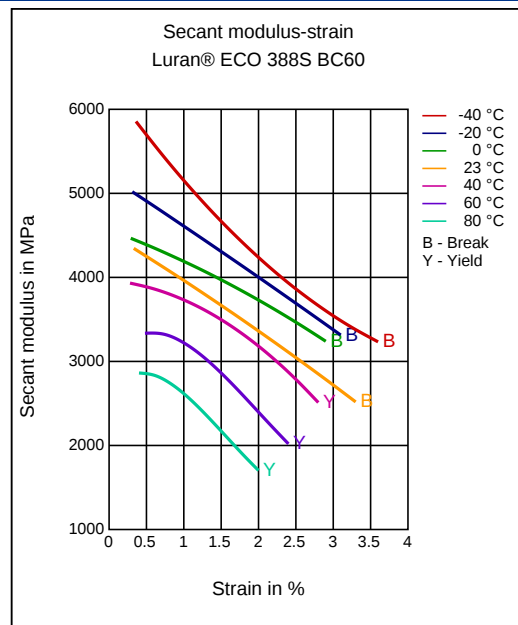
Shearstress-shear rate



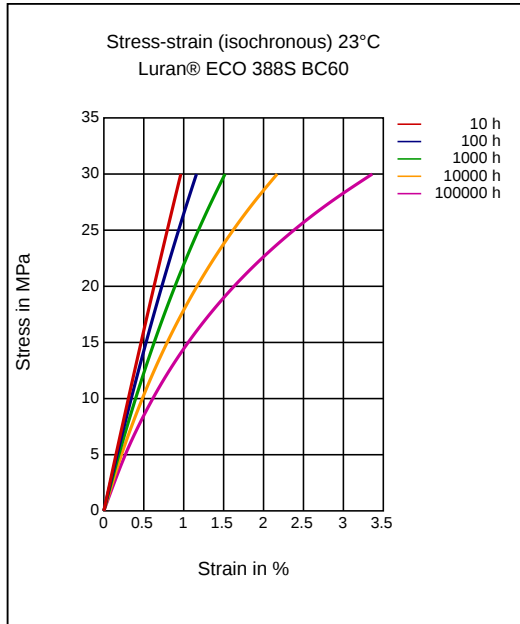
Stress-strain



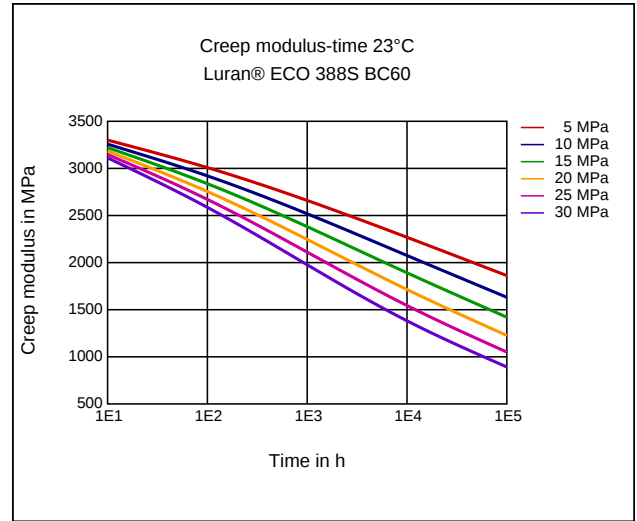
Secant modulus-strain



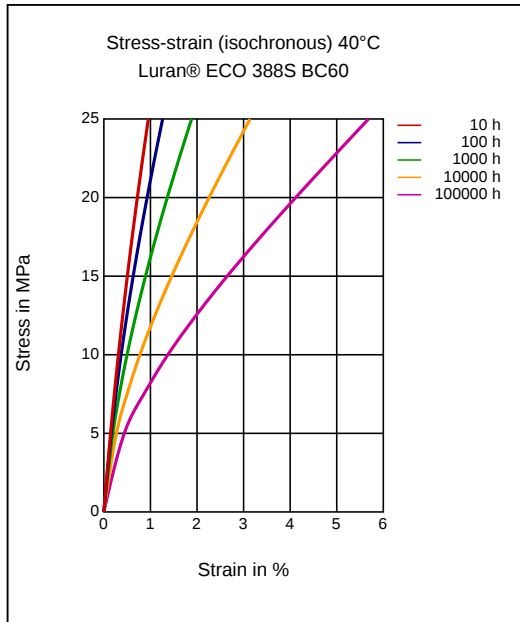
Stress-strain (isochronous) 23°C



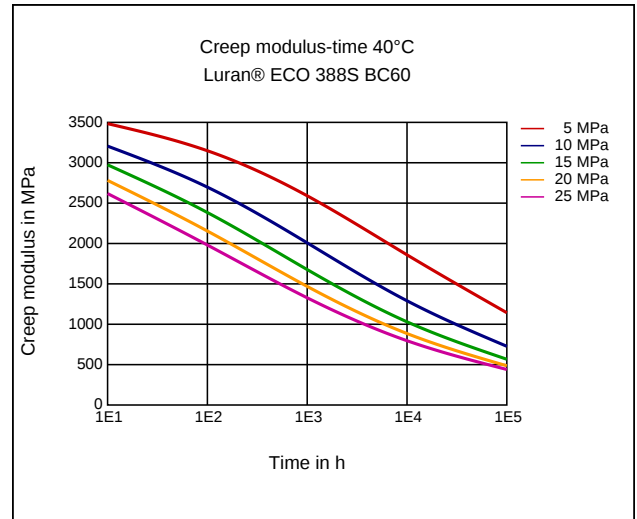
Creep modulus-time 23°C



Stress-strain (isochronous) 40°C



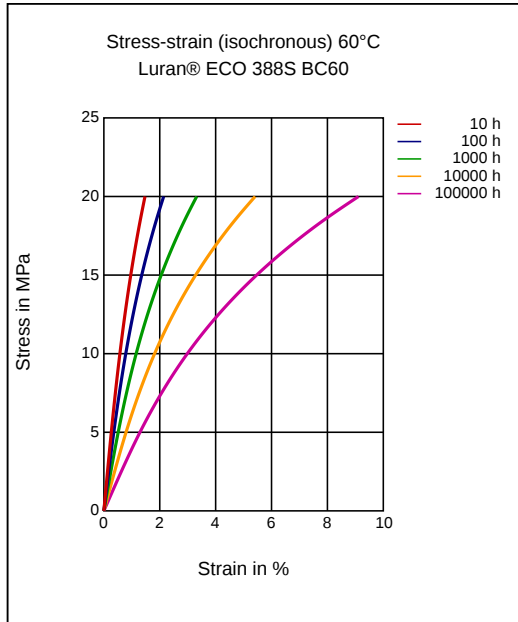
Creep modulus-time 40°C



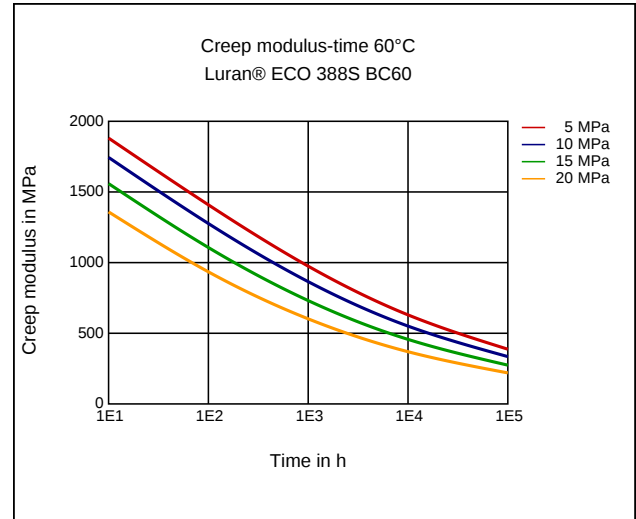
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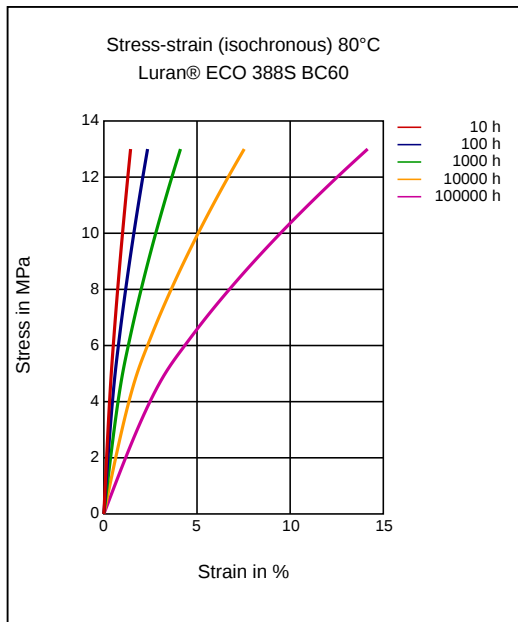
Stress-strain (isochronous) 60°C



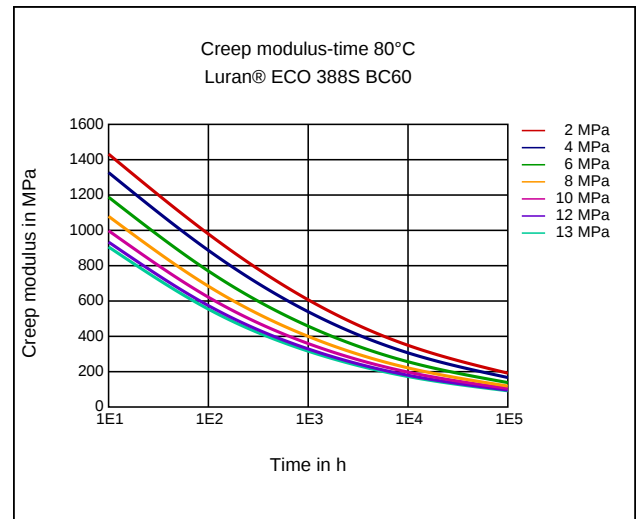
Creep modulus-time 60°C



Stress-strain (isochronous) 80°C



Creep modulus-time 80°C

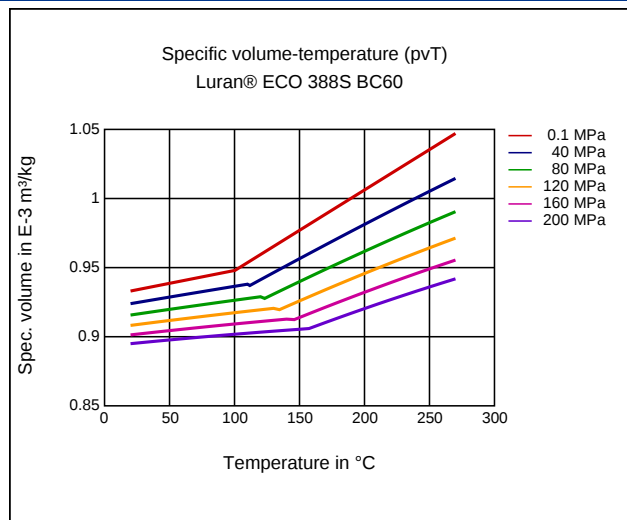


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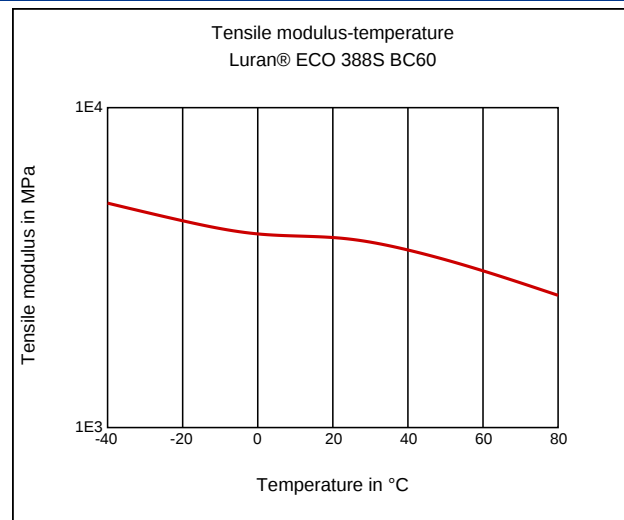
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Specific volume-temperature (pvT)



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

Electrical and Electronical

Injection Molding

PREPROCESSING

Pre-drying, Temperature: 80 °C

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 - 4h

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

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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)
- ✓ 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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