

Styrolux® 656C
SB

INEOS Styrolution

Styrolux® 656C comprises of clear styrene butadiene copolymer. The grade has in general an intrinsic toughness, is easy to process and works as modifier and compatibilizer not only in polystyrene but in many other polymers, e.g. polyolefins. For Styrolux® 656C food contact statements are available upon request. Styrolux® 656C shows enhanced flow properties and is used almost exclusively used for injection molding of rigid, tough parts, requiring highest levels of clarity and surface gloss. Styrolux 656C is also offered for medical applications and is Gamma, X-ray & ETO sterilizable.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	16	cm ³ /10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	1600	MPa	ISO 527
Yield stress	35	MPa	ISO 527
Yield strain	2.5	%	ISO 527
Nominal strain at break	20	%	ISO 527
Tensile Creep Modulus, 1h	1550	MPa	ISO 899-1
Impact Strength (Charpy), +23°C	20	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	1	kJ/m ²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	59	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	73	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	60	°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	-	-

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.07	%	Sim. to ISO 62
Density	1020	kg/m ³	ISO 1183

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Melt temperature	180 - 250	°C	-
Mold temperature	30 - 50	°C	-

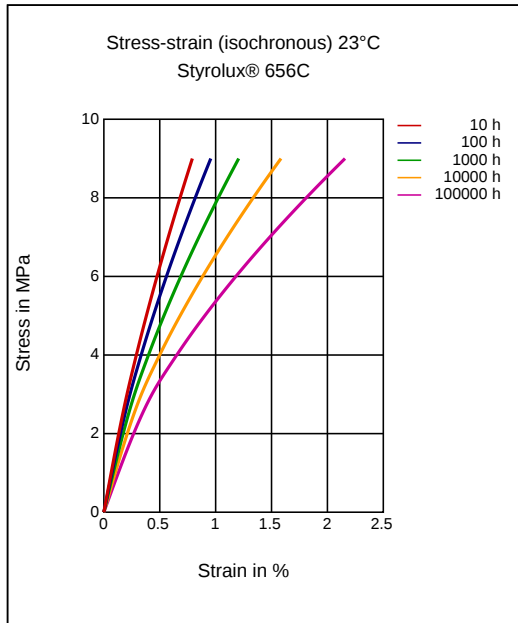
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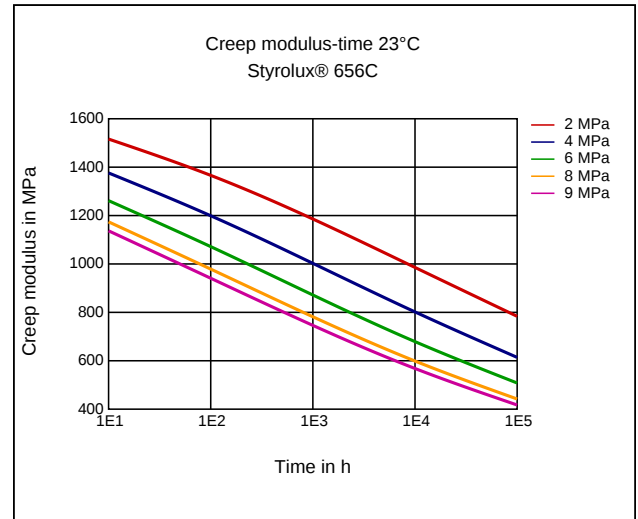
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Diagrams

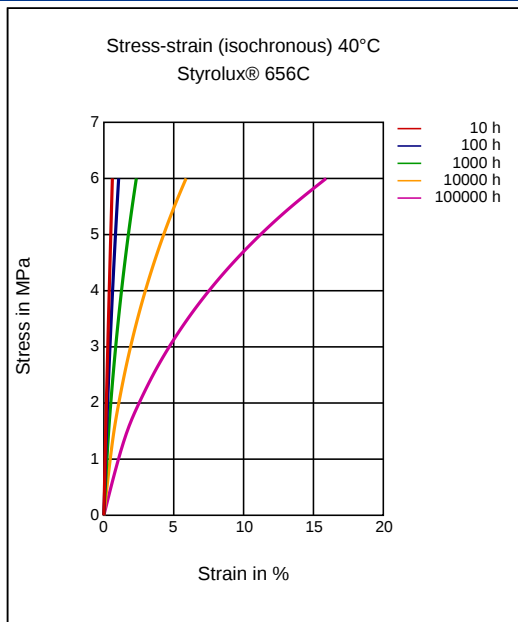
Stress-strain (isochronous) 23°C



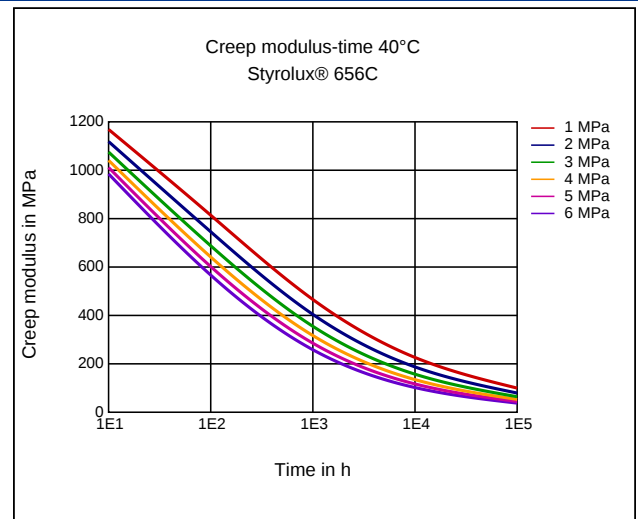
Creep modulus-time 23°C



Stress-strain (isochronous) 40°C



Creep modulus-time 40°C

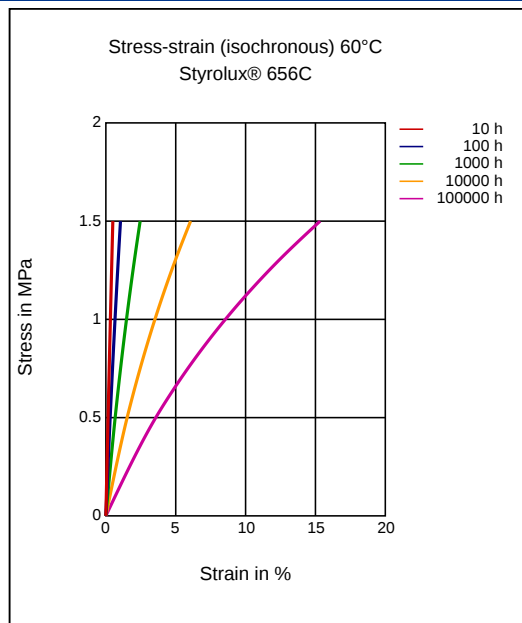


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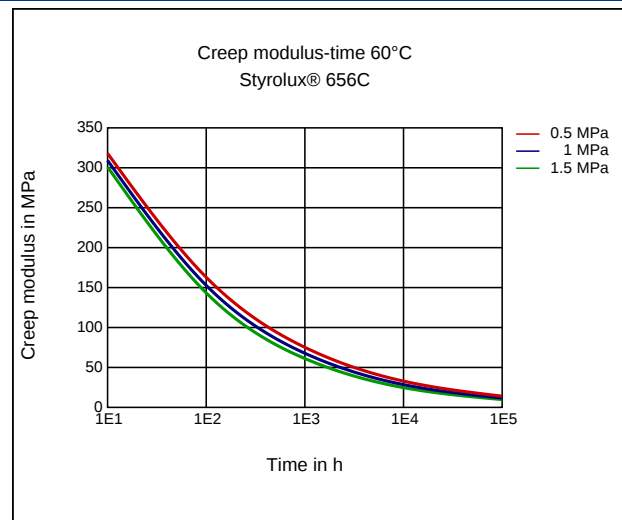
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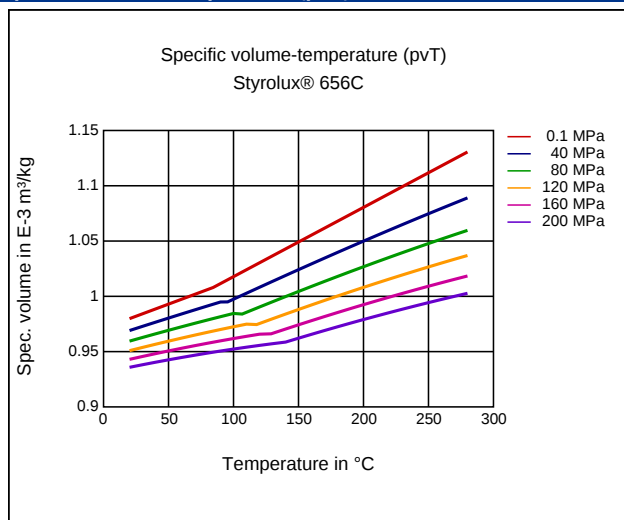
Stress-strain (isochronous) 60 °C



Creep modulus-time 60 °C



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Special Characteristics

Sterilizable, Ethylene Oxide (EtO) Sterilization, Gamma irradiation sterilization

Chemical Resistance

Radiation Resistance

Certifications

Medical, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved, Drug Master File, Long term supply assurance, Food approval, Food approval 10/2011, Food Contact (FDA)

Applications

Medical

Injection Molding

As a rule, the Styrolux® granules do not have to be pre-dried. However, in the event of unfavorable storage or transportation conditions

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involving severe temperature fluctuations, moisture can condense on the surface of the granules and this then has to be removed in a pre-drying step. The granules should be pre-dried in a dry-air dryer for 3 to 4 hours at a temperature of about 50 °C.

PROCESSING

Melt temperature, range: 180 - 250 °C

Mold temperature, range: 30 - 50 °C
