

Styrolution® PS 495N

PS-I

INEOS Styrolution

Styrolution PS 495N is an impact resistant polystyrene with a good balance of toughness, high flow, heat resistance and high gloss.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	9.5	cm³/10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2000	MPa	ISO 527
Yield stress	26	MPa	ISO 527
Yield strain	1.5	%	ISO 527
Nominal strain at break	40	%	ISO 527
Notched Impact Strength (Charpy), +23°C	17	kJ/m²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	85	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	89	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	89	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	80	E-6/K	ISO 11359-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	2.5	-	IEC 62631-2-1
Dissipation Factor, 100Hz	4	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	4	E-4	IEC 62631-2-1

Other Properties	Value	Unit	Test Standard
ISO Data			
Density	1040	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Thermal Conductivity of Melt	0.165	W/(m K)	-
Spec. heat capacity of melt	2120	J/(kg K)	-
Ejection temperature	88	°C	-

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Melt temperature	180 - 260	°C	-
Mold temperature	10 - 60	°C	-

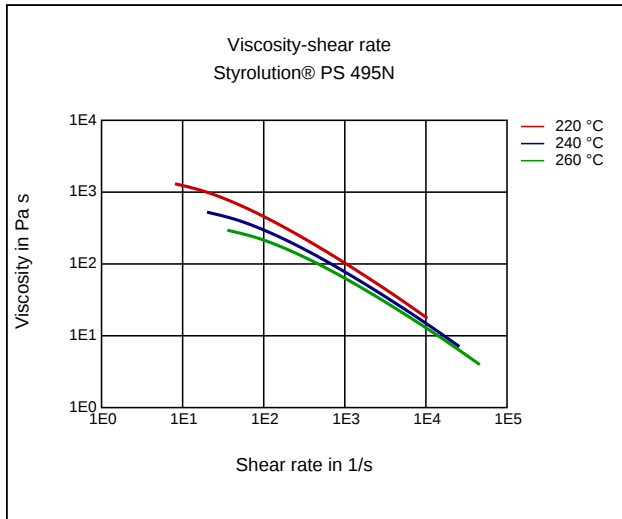
Styrolution® PS 495N

PS-I

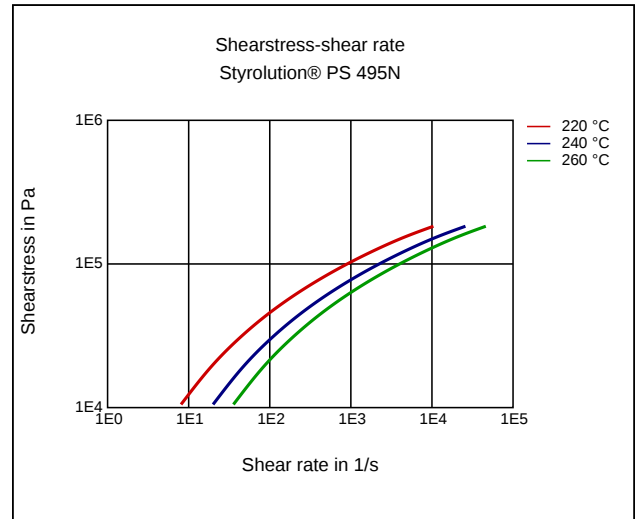
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Diagrams

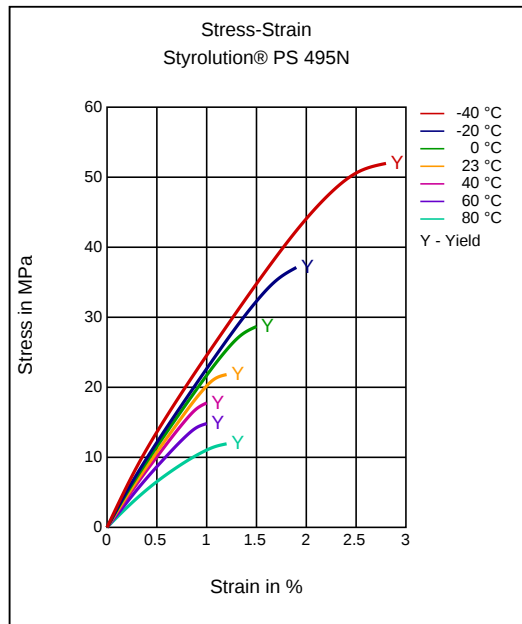
Viscosity-shear rate



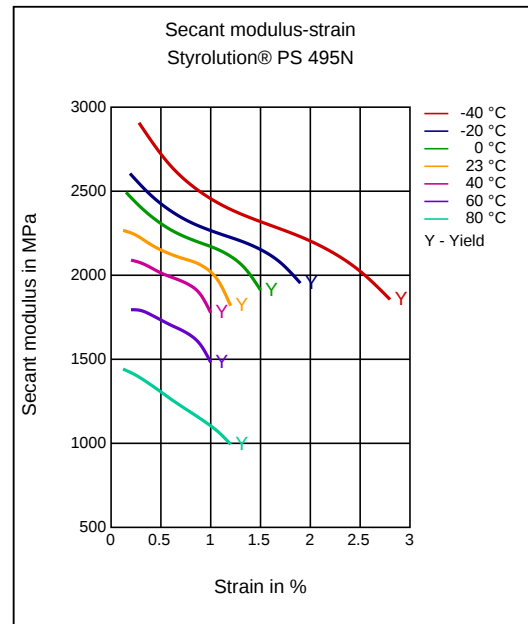
Shearstress-shear rate



Stress-strain



Secant modulus-strain

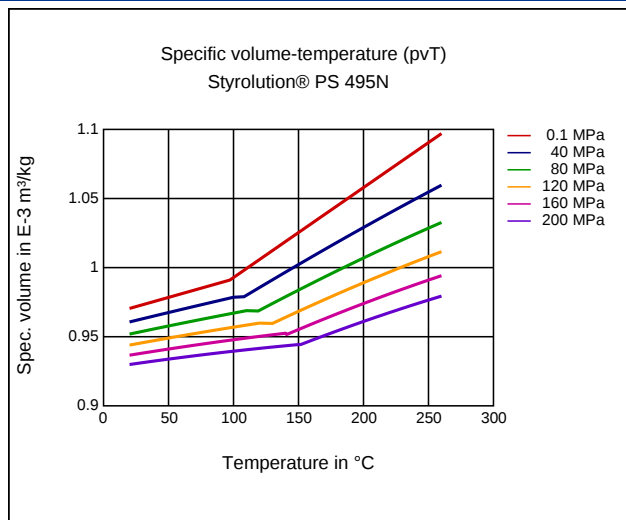


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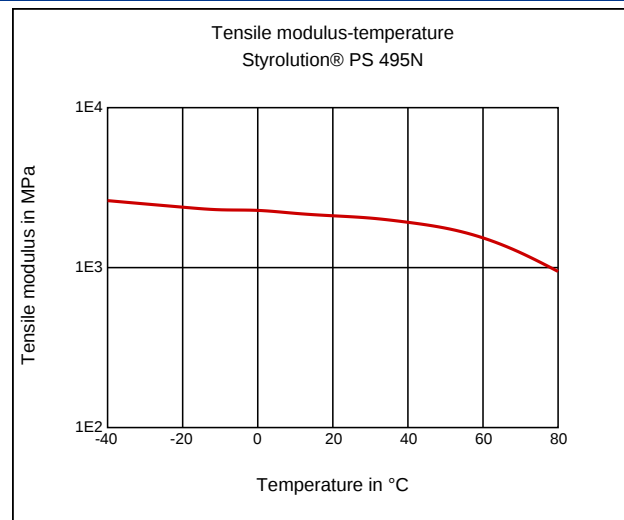
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Specific volume-temperature (pvT)



Tensile Modulus-Temperature



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Special Characteristics

Impact modified

Injection Molding

PROCESSING

Melt temperature, range: 180 - 260°C

Styrolution PS 495N can be injection molded under different conditions depending on machinery available and articles molded. Mass temperature can be as high as 260°C. Styrolution PS 495N is suitable for gas assisted injection molding. To achieve articles with very high gloss, well-polished surfaces are recommended.