

Styrolution® PS 485N

PS-I

INEOS Styrolution

Styrolution PS 485N is a high-impact grade of polystyrene for extruded sheets with a matt surface.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	4	cm ³ /10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	1650	MPa	ISO 527
Yield stress	23	MPa	ISO 527
Yield strain	1.6	%	ISO 527
Nominal strain at break	35	%	ISO 527
Impact Strength (Charpy), -30°C	140	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	10	kJ/m ²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, 50°C/h 50N	90	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	80	E-6/K	ISO 11359-1/-2
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	-	-

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/m ³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Thermal Conductivity of Melt	0.155	W/(m K)	-
Spec. heat capacity of melt	2100	J/(kg K)	-
Ejection temperature	77	°C	-

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

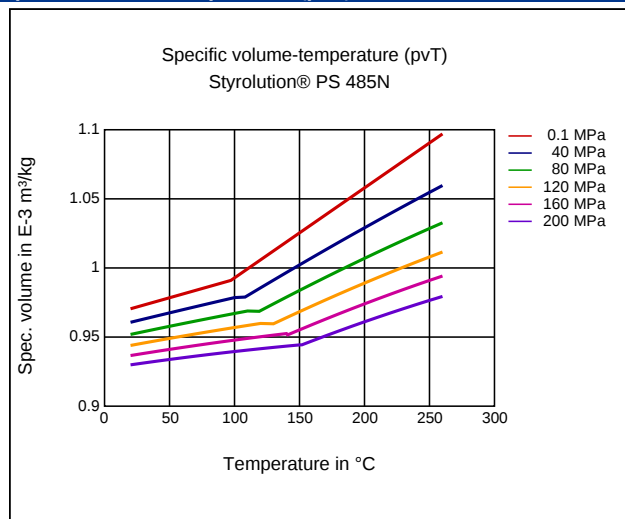
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Diagrams

Specific volume-temperature (pvT)



Characteristics

Processing

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

Special Characteristics

Impact modified

Delivery form

Pellets

Injection Molding

PROCESSING

Melt temperature, range: 180 - 260°C

Mold temperature: 45°C

Styrolution PS 485N can be processed by all conventional techniques using standard conditions for impact polystyrene. Mass temperature during extrusion should be below 240°C.

Film Extrusion

PROCESSING

Blown film, Melt temperature: 180 - 210°C

Flat film, Melt temperature: 200 - 240°C

Extrusion temperatures should not exceed 240°C.

Other Extrusion

PROCESSING

Pipes, Melt temperature: 180 - 210°C

Profile extrusion

PROCESSING

Profiles, Melt temperature: 210°C

Sheet Extrusion

PROCESSING

Plates, Melt temperature: 200 - 240°C

Extrusion temperatures should not exceed 240°C.