INEOS Styrolution

# Styrolution® PS 485N

PS-I

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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 | cm³/10min | 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/m² | ISO 179/1eU |
| Notched Impact Strength (Charpy), +23°C | 10 | kJ/m² | 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 |

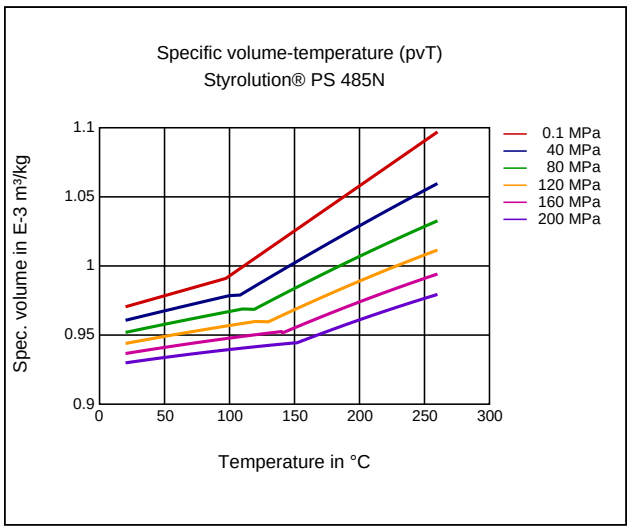
| Other Properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Density | 1040 | kg/m³ | ISO 1183 |

| 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 | - |

## 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.

### Disclaimer

**Liability Exclusion**
These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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