Styrolution PS 1300/1301
General Purpose Polystyrene
INEOS Styrolution Group GmbH

Technical Data

Product Description

FEATURES
• Good balance of flow and strength
• High stiffness
• USP Class VI certified
• UL Classification 94 HB (www.UL.com file E57787)

APPLICATIONS
• Medical labware
• Appliance accessory parts
• Profile extrusion
• Cosmetic cases

General

Material Status
• Commercial: Active

Literature
• Technical Datasheet (English)

UL Yellow Card
• E57787-100082694
• E57787-627865
• E57787-627866

Search for UL Yellow Card
• INEOS Styrolution Group GmbH
• Styrolution PS

Availability
• Latin America
• North America

Features
• General Purpose
• High Stiffness

Uses
• Appliance Components
• Cosmetics
• Labware
• Medical/Healthcare Applications
• Profiles

Agency Ratings
• USP Class VI

UL File Number
• E57787

Forms
• Pellets

Processing Method
• Profile Extrusion

Physical

Nominal Value (English) Nominal Value (SI) Test Method

Specific Gravity 1.04 1.04 g/cm³ ASTM D792

Apparent Density
- 0.59 to 0.64 g/cm³ 0.59 to 0.64 g/cm³
- 0.62 to 0.67 g/cm³ 0.62 to 0.67 g/cm³

Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) 3.0 g/10 min 3.0 g/10 min ASTM D1238

Molding Shrinkage - Flow 4.0E-3 to 7.0E-3 in/in 0.40 to 0.70 % ASTM D955

Mechanical

Nominal Value (English) Nominal Value (SI) Test Method

Tensile Modulus 460000 psi 3170 MPa ASTM D638

Tensile Strength (Yield, 73°F (23°C)) 7100 psi 49.0 MPa ASTM D638

Tensile Elongation (Break) 2.0 % ASTM D638

Flexural Modulus 480000 psi 3310 MPa ASTM D790

Flexural Strength 14500 psi 100 MPa ASTM D790

Impact

Notched Izod Impact (73°F (23°C)) 0.40 ft·lb/in 21 J/m ASTM D256

Hardness

Rockwell Hardness (M-Scale) 76 ASTM D785

Thermal

Nominal Value (English) Nominal Value (SI) Test Method

Deflection Temperature Under Load 6 264 psi (1.8 MPa), Annealed 200 °F 93.3 °C ASTM D1525

Vicat Softening Temperature 223 °F 106 °C
### Thermal

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Nominal Value (English)</th>
<th>Nominal Value (SI)</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLTE - Flow</td>
<td>4.0E-5 in/in/°F</td>
<td>7.2E-5 cm/cm/°C</td>
<td>ASTM D696</td>
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</tbody>
</table>

### Electrical

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Nominal Value (English)</th>
<th>Nominal Value (SI)</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dielectric Strength (0.125 in (3.18 mm))</td>
<td>500 V/mil</td>
<td>20 kV/mm</td>
<td>ASTM D149</td>
</tr>
<tr>
<td>Dielectric Constant</td>
<td>0.0394 in (1.00 mm), 1 MHz</td>
<td>2.50</td>
<td>2.50</td>
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</tbody>
</table>

### Flammability

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Nominal Value (English)</th>
<th>Nominal Value (SI)</th>
<th>Test Method</th>
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</thead>
<tbody>
<tr>
<td>Flame Rating</td>
<td>HB</td>
<td>HB</td>
<td>UL 94</td>
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### Optical

<table>
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<tr>
<th>Test Method</th>
<th>Nominal Value (English)</th>
<th>Nominal Value (SI)</th>
<th>Test Method</th>
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</thead>
<tbody>
<tr>
<td>Refractive Index</td>
<td>1.590</td>
<td>1.590</td>
<td>UL 94</td>
</tr>
<tr>
<td>Transmittance (550 nm)</td>
<td>88.0 to 90.0 %</td>
<td>88.0 to 90.0 %</td>
<td>ASTM D542</td>
</tr>
<tr>
<td>Optical Density - 400-700 nm avg.</td>
<td>0.0460</td>
<td>0.0460</td>
<td>ASTM D1003</td>
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</tbody>
</table>

### Extrusion

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Nominal Value (English)</th>
<th>Nominal Value (SI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melt Temperature</td>
<td>360 to 530 °F</td>
<td>182 to 277 °C</td>
</tr>
</tbody>
</table>

### Notes

1. These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.
2. A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.
3. Typical properties: these are not to be construed as specifications.
4. without external lubricant
5. with external lubricant
6. 4h/80°C
7. Rate B (120°C/Ch), Loading 1 (10 N)
8. Sodium D line
Where to Buy

Supplier
INEOS Styrolution Group GmbH
Frankfurt, Germany
Telephone: +49 69 5095501200
Web: http://www.ineos-styrolution.com

Distributor
M. Holland Canada Company
Telephone: 905-665-1168
Web: http://www.mholland.com/
Availability: Canada

M. Holland Company
Telephone: 855-497-1403
Web: http://www.mholland.com/
Availability: Mexico, United States

Nexeo Solutions
Telephone: 888-594-6009
Web: http://www.nexeosolutions.com/
Availability: North America

PolyOne Distribution
PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.
Telephone: 800-894-4266
Web: http://polyonedistribution.com/
Availability: Global