

# Styrolution PS 1200/1201

General Purpose Polystyrene (GPPS)

## TECHNICAL DATASHEET

### FEATURES

- High melt strength
- High Stiffness
- USP Class VI certified
- UL Classification 94 HB (www.UL.com file E57787)

### APPLICATIONS

- Extrusion / thermoforming foam sheet
- Biaxially oriented sheet (OPS)
- Meat & poultry trays, dinnerware, egg cartons, food packaging
- Glazing sheet

| Property, Test Condition                                     | Standard    | Unit                  | Values  |
|--|-------------|-----------------------|---------|
| <b>Rheological Properties</b>                                |             |                       |         |
| Melt Flow Rate, 200 °C/5 kg                                  | ASTM D 1238 | g/10 min              | 1.6     |
| <b>Mechanical Properties</b>                                 |             |                       |         |
| Izod Notched Impact Strength, 23 °C (73 °F)                  | ASTM D 256  | ft-lb/in              | 0.4     |
| Tensile Stress at Yield, 23 °C                               | ASTM D 638  | psi                   | 7600    |
| Tensile Modulus  | ASTM D 638  | psi x 10 <sup>3</sup> | 460     |
| Elongation, Failure  | ASTM D 638  | %                     | 3       |
| Flexural Strength, 23 °C                                     | ASTM D 790  | psi                   | 15500   |
| Flexural Modulus, 23 °C                                      | ASTM D 790  | psi x 10 <sup>3</sup> | 480     |
| Hardness, Rockwell   | ASTM D 785  | M scale               | 78      |
| <b>Thermal Properties</b>                                    |             |                       |         |
| Vicat Softening Temperature, B/1 ( 120 °C/h, 10N)            | ASTM D 1525 | °F                    | 228     |
| Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa) |             | °F                    | 203     |
| Coefficient of Linear Thermal Expansion                      | ASTM D 696  | 10 <sup>-4</sup> /°F  | 0.4     |
| <b>Electrical Properties</b>                                 |             |                       |         |
| Dielectric Constant at 106 CPS (1000000 Hz, 0,0394 in)       | ASTM D 150  | -                     | 2.5     |
| Dielectric Strength, 1/8"                                    | ASTM D 149  | kV/in                 | 500     |
| <b>Optical Properties</b>                                    |             |                       |         |
| Refractive Index, Sodium D Line                              | ASTM D 542  | -                     | 1.59    |
| Light Transmission at 550 nm                                 | ASTM D 1003 | %                     | 88 - 90 |
| Optical Density, 400–700 nm avg.                             |             | -                     | 0.046   |

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|---|------------|--------------------|----------------|
| <b>Other Properties</b>                   |            |                    |                |
| Density                                   | ASTM D 792 | -                  | 1.04           |
| Bulk Density (with external lubricant)    |            | lb/ft <sup>3</sup> | 39 - 42        |
| Bulk Density (without external lubricant) |            | lb/ft <sup>3</sup> | 37 - 40        |
| <b>Processing</b>                         |            |                    |                |
| Linear Mold Shrinkage                     | ASTM D 955 | in/in              | 0.004 to 0.007 |
| Melt Temperature Range                    |            | °F                 | 360 - 530      |
| Mold Temperature Range                    |            | °F                 | 100 - 180      |

Typical values for uncolored products

## SUPPLY FORM

Styrolution PS 1200 can be supplied in two versions, with (grade name ending in 1) or without an external lubricant (grade name ending in 0) for improving pneumatic conveying. Styrolution PS resins are available in bulk railcar and bulk truckload quantities.

## PRODUCT SAFETY

Styrolution PS resins are biologically and chemically inert, but improper disposal may present an ingestion hazard to wildlife. Where recycling of Styrolution PS resins is not possible, disposal to landfill or incineration in accordance with all applicable government laws and regulations is recommended. Please contact Styrolution Technical Service for further information on recycling and disposal of Styrolution resins.

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