

# Styrolution PS 1621

General Purpose Polystyrene (GPPS)

## TECHNICAL DATASHEET

### FEATURES

- Easy flow material with excellent moldability
- Excellent clarity and set-up time
- UL Classification 94HB (www.UL.com file E57787)

### APPLICATIONS

- Applications requiring fast processing, good strength and heat resistance
- Medical applications
- Coextruded gloss cap over HIPS

| Property, Test Condition                                     | Standard    | Unit                  | Values  |
|--------------------------------------------------------------|-------------|-----------------------|---------|
| <b>Rheological Properties</b>                                |             |                       |         |
| Melt Flow Rate, 200 °C/5 kg                                  | ASTM D 1238 | g/10 min              | 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                   | 6800    |
| Tensile Modulus                                              | ASTM D 638  | psi x 10 <sup>3</sup> | 460     |
| Elongation, Failure                                          | ASTM D 638  | %                     | 2       |
| Flexural Strength, 23 °C                                     | ASTM D 790  |                       | 14000   |
| Flexural Modulus, 23 °C                                      | ASTM D 790  | psi x 10 <sup>3</sup> | 480     |
| Hardness, Rockwell                                           | ASTM D 785  | M scale               | 75      |
| <b>Thermal Properties</b>                                    |             |                       |         |
| Vicat Softening Temperature, B/1 ( 120 °C/h, 10N)            | ASTM D 1525 | °F                    | 223     |
| Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa) | -           | °F                    | 200     |
| 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   |

# Styrolution PS 1621

General Purpose Polystyrene (GPPS)

## TECHNICAL DATASHEET

| Property, Test Condition                  | Standard   | Unit               | Values      |
|-------------------------------------------|------------|--------------------|-------------|
| <b>Other Properties</b>                   |            |                    |             |
| Density (ASTM )                           | ASTM D 792 | g/cm <sup>3</sup>  | 1.04        |
| Bulk Density (with external lubricant)    | -          | lb/ft <sup>3</sup> | 37 - 40     |
| Bulk Density (without external lubricant) | -          | lb/ft <sup>3</sup> | 42 - 45     |
| <b>Processing</b>                         |            |                    |             |
| Melt Temperature Range                    | -          | °F                 | 375 - 525   |
| Mold Temperature Range                    | -          | °F                 | 100 - 180   |
| Linear Mold Shrinkage                     | ASTM D 955 | in/in              | 0.004-0.007 |