

TYPICAL PHYSICAL PROPERTIES

Polystyrene

| Property | Test Method | Conditions | Units | Value | |
|----------------------------------|-------------|------------------|-------------------|----------|----------|
| Physical | | | | GPPS | HIPS |
| Relative Density | ISO 1183 | | g/cm ³ | 1.05 | 1.05 |
| Water Absorption | ISO 62 | 23 °C | % | <0.1 | <0.1 |
| Mechanical | | | | | |
| Tensile Strength at Yield | ISO 527 | | MPa | | |
| Tensile Strength at Break | ISO 527 | | MPa | 55 | 24 |
| Elongation at Yield | | | | | |
| Elongation at Break | ISO 527 | | % | 3 | 35 |
| Tensile Modulus of Elasticity | | | | | |
| Flexural Modulus | ISO 178 | | MPa | 3,300 | 1950 |
| Flexural Strength at Yield | ISO 790 | | MPa | 80 | 22 |
| Izod Impact Strength | ISO 180a | notched | KJ/m | 1.5 | 10 |
| Charpy Impact Strength | ISO 179/1eA | notched | KJ/m | 3 | 12 |
| Impact Falling Weight | | | | | |
| Rockwell Hardness | ASTM D-785 | | R Scale | 105 | 65 |
| Thermal | | | | | |
| Service Temperature | | | | | |
| Heat Distortion Temperature | ISO 75 | Load: 1.82MPa | °C | 76 | 74 |
| Vicat Softening Temperature | ISO 306 | 50°C/h 50N | °C | 89 | 90 |
| Coefficient of Thermal Expansion | ASTM D-696 | | 1/°C | 8.00E-05 | 1.00E-04 |
| Thermal Conductivity | | | | | |
| Specific Heat Capacity | | | | | |
| Optical | | | | | |
| Light Transmission | ASTM D-1003 | | % | 90 | |
| Refractive Index | ASTM D-542 | | | 1.59 | |
| Yellowness Index | | | | | |
| Haze | | | | | |
| Electrical | | | | | |
| Dielectric Strength | IEC 243/1 | 23 °C | kV/mm | 135 | 155 |
| Surface Resistivity | IEC 93 | | Ω | 1.0E+13 | 1.0E+14 |

Other physical properties and values available on request.

Flammability

| Standard | Classification |
|----------|----------------|
| UL 94 | HB |