

Roll Stock Sign Grade Acrylic Sheet

Physical Property & Performance Summary

| Property | ASTM | UNITS | OPTIX® DURAPLEX® | | |
|----------------------------------|--------|--------------|------------------------|----------------------|----------------------|
| | | | SG | SG-05 | SG-10 |
| Optical | | | | | |
| Light Transmittance | D-1003 | % | 92 | 92 | 90 |
| Percent Haze | D-1003 | % | 2 | 2 | <3 |
| Mechanical | | | | | |
| Izod Impact Strength (73°F) | D-256 | ft.-lbs./in. | 0.4 | 0.7 | 1.1 |
| Izod Impact Strength (0°F) | D-256 | ft.-lbs./in. | 0.2 | 0.2 | 0.5 |
| Tensile Modulus of Elasticity | D-638 | PSI | 490,000 | 340,000 | 250,000 |
| Tensile Strength @ Yield | D-638 | PSI | 11,030 | 8,000 | 5,600 |
| Flexural Strength @ Yield | D-790 | PSI | 17,000 | 12,000 | 8,300 |
| Rockwell Hardness Method A | D-785 | | 95 | 68 | 46 |
| Thermal | | | | | |
| Deflection Temperature (264 psi) | D-648 | °F | 203 | 194 | 185 |
| Coefficient of Thermal Expansion | D-696 | in./in.-°F | 3.0 x 10 ⁻⁵ | 4 x 10 ⁻⁵ | 5 x 10 ⁻⁵ |
| Processing | | | | | |
| Density Specific Gravity | D-792 | | 1.19 | 1.17 | 1.15 |
| Moisture Water Absorption | D-570 | % wt. gain | 0.4 | 0.3 | 0.3 |
| Dimensional Molding Shrinkage | D-955 | mils./in. | 2 - 6 | 3 - 6 | 3 - 6 |

Suggested Thermoforming Conditions

| Property | UNITS | OPTIX® DURAPLEX® | | | Cast Acrylic |
|---|---------|------------------|---------|---------|--------------|
| | | SG | SG-05 | SG-10 | |
| Thermoforming for Sheet Thickness 0.100" to 0.375" | | | | | |
| Optimal Forming Temperature | °F | 320 | 315 | 310 | 380 |
| Forming Temperature Range | °F | 270-350 | 270-350 | 270-350 | 350-390 |
| Heating Time | Minutes | 1 - 10 | 1 - 10 | 1 - 10 | 2 - 25 |
| Two Sided Infrared | | | | | |
| Cooling Time | Minutes | 0.5 - 4 | 0.5 - 4 | 0.5 - 4 | 1 - 7 |
| Optimal Mold Temperature | °F | 180 | 175 | 170 | 190 |
| Free Shrinkage at Forming Temperature | | | | | |
| Machine Direction | % | 1 - 3 | 1 - 3 | 1 - 3 | 0 - 2 |
| Transfer Direction | % | 0 | 0 | 0 | 0 - 2 |

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.