

# PLASKOLITE

## Roll Stock Acrylic Sheet

### Typical Properties

| Physical                          | TEST METHOD     | UNITS   | DURAPLEX OPTIX SG05 (50%) | DURAPLEX OPTIX SG10 (100%) | OPTIX |
|-----------------------------------|-----------------|---------|---------------------------|----------------------------|-------|
| Specific Gravity/Relative Density | ASTM D792       |         | 1.17                      | 1.15                       | 1.19  |
| Light Transmission -Total         | ASTM D1003      | %       | 92                        | 90                         | 92    |
| Light Transmission - Haze         | ASTM D1003      | %       | 2                         | >3                         | 2     |
| Water Absorption                  | ASTM D570       | %       | 0.3                       | 0.3                        | 0.4   |
| Mold Shrinkage                    | ASTM D955       | mils/in | 3-6                       | 3-6                        | 2-6   |
| Optical Refractive Index          | ASTM D542       |         | 1.49                      |                            |       |
| Sound Transmission                | ASTM E90 / E413 | dB      | 27                        |                            |       |

| Mechanical  | TEST METHOD | UNITS                 | DURAPLEX OPTIX SG05 (50%) | DURAPLEX OPTIX SG10 (100%) | OPTIX   |
|---|-------------|-----------------------|---------------------------|----------------------------|---------|
| Tensile Strength                                  | ASTM D638   | psi                   | 8,000                     | 5,600                      | 11,030  |
| Tensile Modulus of Elasticity                     | ASTM D638   | psi                   | 340,000                   | 250,000                    | 490,000 |
| Flexural Strength                                 | ASTM D790   | psi                   | 12,000                    | 8,300                      | 17,000  |
| Izod Impact Strength – Molded Notch               | ASTM D256   | ft-lb/in Notch        | 0.7                       | 1.1                        | 0.4     |
| Ball Drop Impact                                  |             |                       | Pass                      | Pass                       |         |
| Rockwell Hardness                                 | ASTM D785   |                       | M-68                      | M-46                       | M-95    |
| Tensile Elongation – Max.                         | ASTM D638   | %                     | 5.8                       |                            |         |
| Flexural Modulus of Elasticity                    | ASTM D790   | psi                   | 490,000                   |                            |         |
| Izod Impact Strength – Milled Notch               | ASTM D256   | ft-lb/in Notch        | 0.28                      |                            |         |
| Tensile Impact Strength                           | ASTM D1822  | ft-lb/in <sup>2</sup> | 20                        |                            |         |
| Abrasion Resistance - Change in Haze - 0 cycles   | ASTM D1044  | Haze, %               | 0                         |                            |         |
| Abrasion Resistance - Change in Haze - 10 cycles  | ASTM D1044  | Haze, %               | 11.2                      |                            |         |
| Abrasion Resistance - Change in Haze - 50 cycles  | ASTM D1044  | Haze, %               | 24                        |                            |         |
| Abrasion Resistance - Change in Haze - 200 cycles | ASTM D1044  | Haze, %               | 24.9                      |                            |         |

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.

Questions? Please contact Plaskolite Customer Support 800-848-9124

**PLASKOLITE**

400 W Nationwide Blvd, Suite 400  
Columbus, Ohio 43215  
800-848-9124 Fax: 877-538-0754  
www.plaskolite.com

| Thermal  | TEST METHOD | UNITS                         | DURAPLEX OPTIX SG05 (50%) | DURAPLEX OPTIX SG10 (100%) | OPTIX                |
|--|-------------|-------------------------------|---------------------------|----------------------------|----------------------|
| Deflection Temperature @ 264 psi (1.8 MPa)         | ASTM D648   | °F                            | 194                       | 185                        | 203                  |
| Coefficient of Thermal Expansion                   | ASTM D696   | in/in/°F                      | 4x10 <sup>-5</sup>        | 5x10 <sup>-5</sup>         | 3.0x10 <sup>-5</sup> |
| Flammability (Burning Rate)                        | ASTM D635   | in/minute                     | 1.25                      | 1.97                       | 1.019                |
| Flammability                                       | UL 94       |                               | HB                        | HB                         | HB                   |
| Smoke Density Rating                               | ASTM D2843  | %                             | 8.5                       | 16.5                       | 3.4                  |
| Self-Ignition Temperature                          | ASTM D1929  | °F                            | >850                      | >850                       | 833                  |
| Maximum Recommended Continuous Service Temperature |             | °F                            | 170-190                   |                            |                      |
| Softening Temperature                              |             | °F                            | 210-220                   |                            |                      |
| Melting Temperature                                |             | °F                            | 300-315                   |                            |                      |
| Deflection Temperature @ 66 psi (0.45 MPa)         | ASTM D648   | °F                            | 207                       |                            |                      |
| Thermal Conductivity                               | ASTM C177   | BTU-ft/ft <sup>2</sup> /hr/°F | 0.075                     |                            |                      |
| Flame Spread Index                                 | ASTM E84    |                               | 115                       |                            |                      |
| Smoke Developed Index                              | ASTM E84    |                               | 550                       |                            |                      |

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