

PolyGreen™ GS11-UV(X) Polycarbonate Technical Data Sheet

Description and Applications

PolyGreen™ GS11-UV(X) Series are advanced UV protected polycarbonate sheets designed for demanding outdoor applications. GS11-UV1 features a durable co-extruded UV protection layer for economical glazing and signage, while GS11-UV2 offers dual sides UV resistance for maximum weatherability. These sheets maintain optical transparency, surface gloss and mechanical strength during prolonged exposure to direct sun.

PolyGreen™ GS11-UV(X) Series is backed by a minimum 7 years outdoor performance warranty, ensuring long term resistance to yellowing and loss of light transmission under typical environmental conditions.

Typical Property Values

| Property | Test Method | Units | Value |
|---------------------------------|-------------|-------------------|-------------------------|
| Physical | | | |
| Density | ASTM D792 | g/cm ³ | 1.2 |
| Water Absorption, 24 hrs | ASTM D570 | % | 0.17 |
| Flammability | UL94 | | V2 |
| UV Resistance | - | Nm | ≥ 380 |
| Optical | | | |
| Light Transmission | ASTM D1003 | % | 88 - 92 |
| Refraction Rate | JIS-D7105 | % | 1.59 |
| Mechanical | | | |
| Tensile Strength at Break | ASTM D638 | MPa | 2340 |
| Tensile Strain at Break | ASTM D638 | % | 110 |
| Tensile Impact Strength | ASTM D1882 | KJ/m ² | 192 |
| Flexural Strength | ASTM D790 | MPa | 106 |
| Flexural Modulus | ASTM D790 | MPa | 2470 |
| Charpy notched Impact Strength | ASTM D6110 | KJ/m ² | 8.5 – 12.6 |
| Izod notched Impact Strength | ASTM D256 | J/m | 880 |
| Rockwell Hardness | ASTM D785 | Scale R/M | 124 |
| Thermal | | | |
| Coefficient of Linear Expansion | ASTM E831 | 1/°C | 7.2 x 10 ⁻¹⁷ |
| Specific Heat Capacity | ASTM E1269 | J/g•°C | 1.17 |
| Thermal Conductivity | ASTM E1530 | W/(m•k) | 0.235 |
| Thermal Shrinkage | ASTM D1204 | % | 1.8 – 2.2 |
| Vicat Softening Temperature | ASTM D1525 | °C | 146 |
| Heat Deflection Temperature | ASTM D648 | °C | 134 |

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These are typical properties and are not intended for specifications purposes. If minimum certifiable properties are required, please contact your local sales representative. Reported values are based on 2.0mm thickness film unless otherwise noted.

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