

PolyGreen™ SMMA Technical Data Sheet

Description

PolyGreen™ SMMA (Styrene-Methyl Methacrylate) sheet is a transparent copolymer that combines the rigidity of styrene with the clarity and UV resistance of methyl methacrylate (PMMA), resulting in a material with high impact strength and transparency. It features excellent chemical resistance against acids, alcohols, alkalis and house cleaners, maintaining clarity after exposure to common chemicals without crazing and surface degradation. It combines excellent processing advantages & cost effectiveness of styrene polymers, with brilliance & surface quality of polyacetal. It retains excellent dimensional stability due to very low moisture absorption rate, making it ideal for applications in hot and humid conditions.

Typical Applications

- Retail Displays such as signage, point of sales displays, printed graphics, display cases
- Consumer Wares and Medical device (equipment) panels . Used in production of durable clear containers optical lens, basketball net boards where ease of processing, excellent impact and clarity is important
- Automotives decorative panels and parts requiring high clarity and impact resistance
- Electronics housing and enclosures where clarity, durability and UV resistance are essential

Typical Property Values

| Property | Test Method | Units | Value |
|----------------------------------|-------------------------------|-------------------|-------------|
| Physical | | | |
| Density | ASTM D792 | g/cm ³ | 1.12 |
| Moisture Absorption | ASTM D570 | % | 0.1 |
| Rockwell Hardness M | ISO 2039-2 | | 86 |
| Optical | | | |
| Light Transmission | ISO 13468-1 | % | 89-91 |
| Haze | ISO 14782 | % | 2.0 |
| Mechanical | | | |
| Tensile Strength @ Break 5mm/min | ISO 527-2 | MPa | 70 - 73 |
| Elongation @ Break 5mm/min | ISO 527-2 | % | 6 |
| Flexural Strength 2mm/min | ASTM D790 | MPa | 107 - 111 |
| Flexural Modulus 2mm/min | ASTM D790 | GPa | 3.32 – 3.35 |
| Izod Impact Resistance | ASTM D256 | J/cm ² | 1.80 |
| Charpy Impact Notched | ISO 179-2 | J/cm ² | 0.2 |
| Specification | | | |
| Thickness | 1.0mm – 30.0mm | | |
| Thickness Tolerance | +/- 0.2mm | | |
| Maximum Width | 2100mm | | |
| Length | Customised | | |
| Color | Clear or Customised | | |
| Standard Dimensions | 1.22m x 1.83m ; 1.22m x 2.44m | | |

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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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