



Makrolon® NR sheet

Makrolon® NR is an enhanced UV resistant polycarbonate sheet product with a proprietary matte surface which reduces reflections typically associated with smooth sheet. The product's advanced UV resistance technology promotes long lasting outdoor weathering performance. It features outstanding impact strength, superior dimensional stability and high temperature resistance. This lightweight sheet is also easy to fabricate and decorate.

Applications

Display and screen protectors, signage, lenses, menu boards, and other applications requiring a non-reflective surface for improved viewing with reduced glare.

| Typical Properties* | | | |
|---------------------------------------|-------------|-------------------------------|-------------------------|
| Property | Test Method | Units | Values |
| PHYSICAL | | | |
| Specific Gravity | ASTM D 792 | - | 1.2 |
| Refractive Index | ASTM D 542 | - | 1.586 |
| Light Transmission, Clear @ 0.118" | ASTM D 1003 | % | 86 |
| Specular Gloss at 60° | ASTM D 523 | - | 37 |
| Water Absorption, 24 hours | ASTM D 570 | % | 0.15 |
| Poisson's Ratio | ASTM E 132 | - | 0.38 |
| MECHANICAL** | | | |
| Tensile Strength, Ultimate | ASTM D 638 | psi | 9,500 |
| Tensile Strength, Yield | ASTM D 638 | psi | 9,000 |
| Tensile Modulus | ASTM D 638 | psi | 340,000 |
| Elongation | ASTM D 638 | % | 110 |
| Flexural Strength | ASTM D 790 | psi | 13,500 |
| Flexural Modulus | ASTM D 790 | psi | 345,000 |
| Compressive Strength | ASTM D 695 | psi | 12,500 |
| Compressive Modulus | ASTM D 695 | psi | 345,000 |
| Instrumented Impact @ 0.125" | ASTM D3763 | ft/lbs | 45*** |
| Shear Strength, Ultimate | ASTM D 732 | psi | 10,000 |
| Shear Strength, Yield | ASTM D 732 | psi | 6,000 |
| Shear Modulus | ASTM D 732 | psi | 114,000 |
| THERMAL | | | |
| Coefficient of Thermal Expansion | ASTM D 696 | in/in/°F | 3.75 x 10 ⁻⁵ |
| Coefficient of Thermal Conductivity | ASTM C 177 | BTU-in/hr-ft ² -°F | 1.35 |
| Heat Deflection Temperature @ 264 psi | ASTM D 648 | °F | 270 |
| Heat Deflection Temperature @ 66 psi | ASTM D 648 | °F | 280 |
| FLAMMABILITY | | | |
| Horizontal Burn, AEB | ASTM D 635 | in | <1 |
| Ignition Temperature, Self | ASTM D 1929 | °F | 1022 |
| Ignition Temperature, Flash | ASTM D 1929 | °F | 824 |

*Typical properties are not intended for specification purposes.

**Some properties characterized using non-textured sheet.

***Impacted on Matte Surface

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