



Makrolon® FD sheet

FDA food contact compliant

Makrolon® FD sheet is a non-UV stabilized transparent polycarbonate product which complies with FDA regulation 21 CFR § 177.1580 requirements for food contact. It features outstanding impact strength, superior dimensional stability, high temperature resistance, and high clarity. Ideally suited for demanding applications in food processing environments, as well as medical applications, this lightweight thermoformable sheet is also easy to fabricate and decorate. Makrolon FD sheet is offered with a five (5) year Limited Product Warranty against breakage. The terms of the warranty are available upon request.

Applications

Food processing equipment and guards, bulk food bins, candy molds, sneeze guards, single use autoclave packaging, hospital trays, bassinets, incubators, medical device storage containers

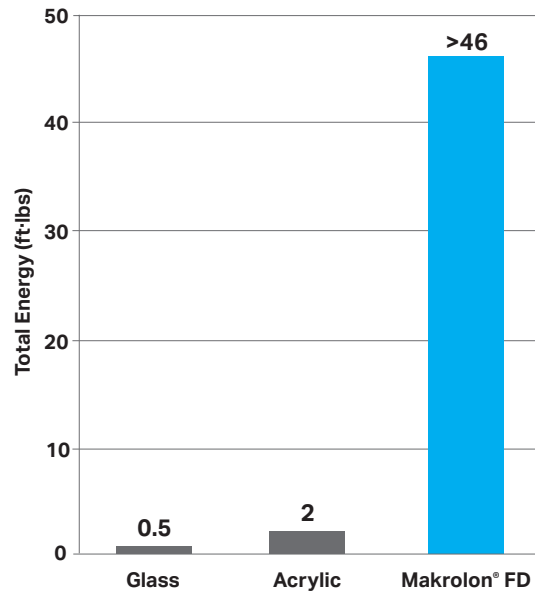
Typical Properties*

| 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 |
| 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 |
| Izod Impact Strength, Notched @ 0.125" | ASTM D 256 | ft-lbs/in | 18 |
| Izod Impact Strength, Unnotched @ 0.125" | ASTM D 256 | ft-lbs/in | 60 (no failure) |
| 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 |
| Brittleness Temperature | ASTM D 746 | °F | -200 |
| ELECTRICAL | | | |
| Dielectric Constant @ 10 Hz | ASTM D 150 | – | 2.96 |
| Dielectric Constant @ 60 Hz | ASTM D 150 | – | 3.17 |
| Volume Resistivity | ASTM D 257 | Ohm-cm | 8.2 x 10 ¹⁶ |
| Dissipation Factor @ 60 Hz | ASTM D 150 | – | 0.0009 |
| Arc Resistance | | | |
| Stainless Steel Strip electrode | ASTM D 495 | Seconds | 10 |
| Tungsten Electrodes | ASTM D 495 | Seconds | 120 |
| Dielectric Strength, in air @ 0.125" | ASTM D 149 | V/mil | 380 |
| FLAMMABILITY | | | |
| Ignition Temperature, Self | ASTM D 1929 | °F | 1022 |
| Ignition Temperature, Flash | ASTM D 1929 | °F | 824 |
| Flame Class @0.060" | UL 94 | – | HB |

*Typical properties are not intended for specification purposes.

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Impact Resistance*



*Instrumented Impact per ASTM D 3763,
sample thickness 0.125" nominal

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