

## MAKROLON® FD

**MAKROLON® FD** polycarbonate sheet is a clear, non-UV stabilized sheet which complies with FDA and NSF® standard 51 requirements. Close gauge tolerance control combined with high impact strength and heat resistance make MAKROLON FD polycarbonate sheet ideally suited for demanding applications in medical equipment as well as food processing environments. MAKROLON FD polycarbonate sheet is covered by a five year warranty against breakage.

### APPLICATIONS

Typical food applications include food processing equipment guards, bulk food bins, candy molds, sneeze guards, commercial serving bowls, and food service accessories.

Typical medical applications include single use autoclave packaging, hospital trays, bassinets, incubators, and medical device storage containers.

### Typical Physical Properties

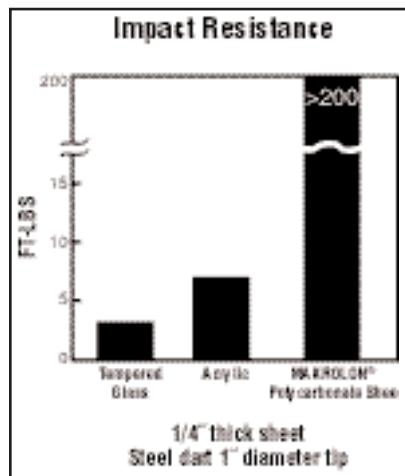
| Property                               | Test Method | Units                        | MAKROLON              |
|--|-------------|------------------------------|-----------------------|
| <b>PHYSICAL</b>                        |             |                              |                       |
| Specific Gravity                       | ASTM D792   | -                            | 1.2                   |
| Light Transmission, Clear 1/8"         | ASTM D1003  | %                            | 86                    |
| Water Absorption, Equilibrium, 24 hrs  | ASTM D570   | %                            | 0.15                  |
| <b>MECHANICAL</b>                      |             |                              |                       |
| Tensile Strength, Yield                | ASTM D638   | psi                          | 9000                  |
| Tensile Strength, Ultimate             | ASTM D638   | psi                          | 9500                  |
| Tensile Modulus                        | ASTM D638   | psi                          | 345000                |
| Flexural Strength                      | ASTM D790   | psi                          | 13500                 |
| Flexural Modulus                       | ASTM D790   | psi                          | 345000                |
| Compressive Strength                   | ASTM D695   | psi                          | 12500                 |
| Compressive Modulus                    | ASTM D695   | psi                          | 345000                |
| Elongation                             | ASTM D638   | %                            | 110                   |
| Poisson's Ratio                        | -           | -                            | 0.38                  |
| Izod Impact Strength, Notched @ 1/8"   | ASTM D256   | Ft-lbs/in                    | 12-16                 |
| Izod Impact Strength, Unnotched @ 1/8" | ASTM D256   | Ft-lbs/in                    | 60 (No failure)       |
| <b>THERMAL</b>                         |             |                              |                       |
| Coefficient of Thermal Expansion       | ASTM D696   | In/in/F                      | $3.75 \times 10^{-5}$ |
| Coefficient of Thermal Conductivity    | ASTM C177   | Btu-in/hr-ft <sup>2</sup> -F | 1.35                  |
| Heat Deflection Temperature, @ 264 psi | ASTM D648   | F                            | 270                   |
| Heat Deflection Temperature, @ 66 psi  | ASTM D648   | F                            | 280                   |
| <b>ELECTRICAL</b>                      |             |                              |                       |
| Dielectric Constant, @ 10 Hz           | ASTM D150   | -                            | 2.96                  |
| Dielectric Constant, @ 60 Hz           | ASTM D150   | -                            | 3.17                  |
| Volume Resistivity                     | ASTM D257   | Ohm-cm                       | $8.2 \times 10^{16}$  |
| Dissipation Factor, @ 60 Hz            | ASTM D150   | -                            | 0.0009                |
| Dissipation Factor, @ 1 MHz            | ASTM D150   | -                            | 0.01                  |
| Arc Resistance                         | ASTM D495   | Seconds                      |                       |
| Stainless Steel Strip Electrode        |             |                              | 10-11                 |
| Tungsten Electrodes                    |             |                              | 120                   |
| Dielectric Strength, in air, 125 mils  | ASTM D149   | V/mil                        | 380                   |



# Product Data

## HIGH IMPACT STRENGTH

MAKROLON polycarbonate sheet is virtually unbreakable with 250 times the impact strength of float glass and 30 times that of acrylic.



**For additional information  
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