



# MAKROLON® 15

## Polycarbonate Sheet



...Clearly the  
Best Choice for  
Glazing Durability



Sheffield Plastics Inc.

A  Bayer MaterialScience Company

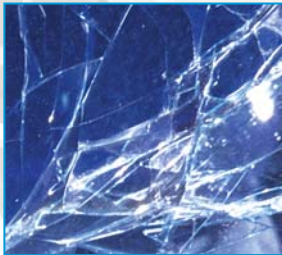
# MAKROLON® 15 Polycarbonate Sheet

The First Glazing Replacement Option  
with a 15 Year Performance Warranty

## A New Superior Polycarbonate Sheet Glazing Solution that Offers:

- ◆ Long-Term Weatherability
- ◆ Vastly Improved Glazing Durability
- ◆ Optical Clarity
- ◆ Vandalism Protection
- ◆ Substantially Superior Impact Resistance
- ◆ Significant Weight Reduction
- ◆ Enhanced Insulating Properties

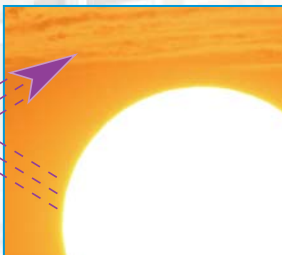
**Substantial  
Impact  
Resistance**



**Vandalism  
Protection**



**UV Resistant  
and Energy  
Efficient**



**Long-Term  
Weatherability**



MAKROLON® 15 Polycarbonate Sheet offers long-term weatherability and is backed by a 15 year performance warranty. This significant performance enhancement is derived from MAKSHIELD™ innovative coating technology. MAKROLON 15 Polycarbonate Sheet achievement in performance offers significant longevity in the application life cycle costs.

MAKSHIELD hard-coat surface approaches the hardness of glass and addresses the issues previously associated with polycarbonate sheets\*.

MAKSHIELD coating technology, combined with the impact strength of MAKROLON Polycarbonate Sheet, builds on Sheffield Plastics' long history of "none tougher" polycarbonate products.

MAKROLON 15 Polycarbonate Sheet is clearly the right choice for glazing where there is potential for glass breakage. These applications include schools, public buildings, transportation centers, and in areas where high traffic and vandalism is prevalent.

\*Note: Based on ASTM Taber Abrasion Test D1044-99, 100 cycles.

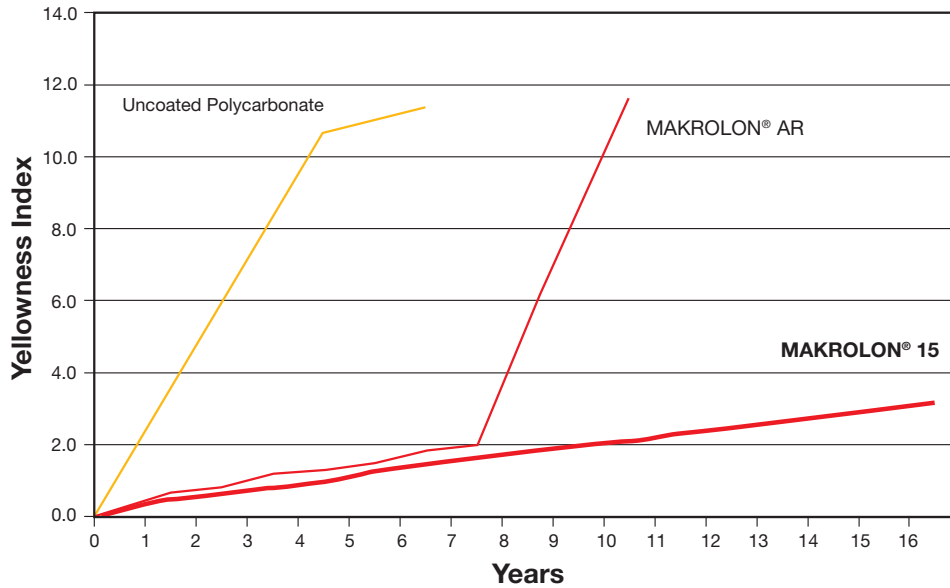
## MAKROLON 15 Performance Warranty

Sheffield Plastics' 15 Year Warranty Guarantees MAKROLON 15 Polycarbonate Sheet for:

- ◆ Breakage Due to Manufacturing Defects
- ◆ Coating Failure
- ◆ Yellowing and Reduced Light Transmission Due to Hazing

# MAKROLON® 15 Polycarbonate Sheet is Proven for Long-Term Performance

Weathering Behavior of MAKROLON® 15 in Vertical Orientation\*



\*Based upon Xenon WOM accelerated weathering for UV dose at mid-latitude location.

## Typical Physical Properties

Property	Test Method	Units	Values
<b>PHYSICAL</b>			
Specific Gravity	ASTM D792	-	1.2
Light Transmission	ASTM D1003	%	86
Taber Abrasion, 100 Cycles CS-10F Delta Haze	ASTM D1044	%	2
<b>MECHANICAL</b>			
Tensile Strength, Ultimate	ASTM D638	psi	9,500
Tensile Modulus	ASTM D638	psi	340,000
Flexural Strength	ASTM D790	psi	13,500
Izod Impact Strength, Notched @ .125"	ASTM D256	ft-lbs/in	16
Izod Impact Strength, Unnotched @ .125"	ASTM D256	ft-lbs/in	No Break
Instrumented Impact, @ .125"	ASTM D3763	ft-lbs	48
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 x 10 <sup>-5</sup>
Heat Deflection Temperature, @ 264 psi	ASTM D648	°F	270
Heat Deflection Temperature, @ 66 psi	ASTM D648	°F	280

## Regulatory Code Compliance and Certifications\*\*

**IBC 2606.4, Class CC1:** International Building Code, Chapter 26, Plastics (Light Transmitting Plastics Specifications)  
**Florida Building Code 2004:** Category: Shutters, Sub-category: Storm Panels and Category: Sky Lights, Sub-category: Skylight  
**CPSC 16 CFR 1201 Category I or Category II:** Safety Standard for Architectural Glazing Materials  
**ANSI Z97.1-2004:** American National Standard for Safety Glazing Materials Used in Buildings—Safety Performance Specifications and Methods of Test  
**UL 972:** Burglary Resistant Glazing Materials UL Listed Product

\*\*Certain gauges of MAKROLON 15 comply with these standards.

# **Clearly...** **MAKROLON® 15 Sheet** **is the Right Choice.**



## **Disclaimer**

The manner in which you use and the purpose to which you put and utilize our products, technical assistance, and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee, and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.

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