



# Makrolon® CQ sheet

## Critical quality

Makrolon® CQ sheet is a clear polished surface, UV stabilized, polycarbonate product used in premium visual applications. It features high performance couples with excellent optical clarity. Makrolon CQ also provides outstanding impact strength and superior dimensional stability. Makrolon CQ sheet has a five (5) year Limited Product Warranty against breakage. The terms of the warranty are available upon request.

## Applications

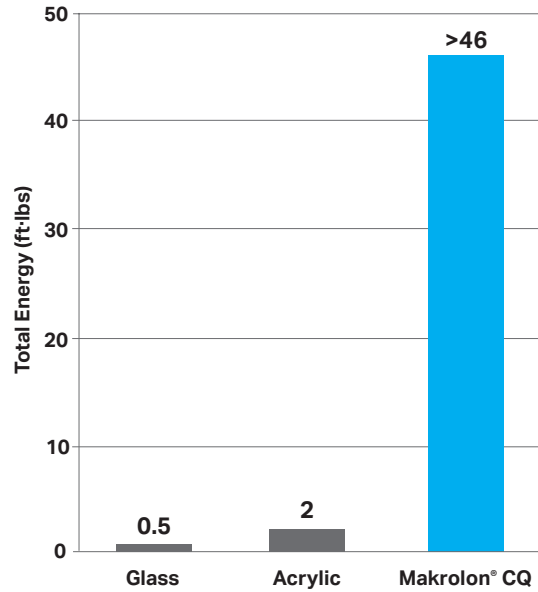
Aftermarket parts, military vehicle glazing, laminated security glazing

## Typical Properties

Property	Test Method	Units	Values
<b>PHYSICAL</b>			
Specific Gravity	ASTM D 792	–	1.2
Refractive Index	ASTM D 542	–	1.586
Light Transmission, Clear @ 0.125"	ASTM D 1003	%	86
Light Transmission, Gray, Bronze	ASTM D 1003	%	50
Light Transmission, Dark Gray	ASTM D 1003	%	18
Water Absorption, 24 hours @ 73°F	ASTM D 570	%	0.15
Poisson's Ratio	ASTM E 132	–	0.38
<b>MECHANICAL</b>			
Tensile Strength, Break	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)
Instrumented Impact @ 0.125"	ASTM D 3763	ft·lbs	>46
Shear Strength, Break	ASTM D 732	psi	10,000
Shear Strength, Yield	ASTM D 732	psi	6,000
Shear Modulus	ASTM D 732	psi	114,000
Rockwell Hardness	ASTM D 785	–	M70 / R118
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D 696	in/in/°F	3.75 x 10 <sup>-5</sup>
Coefficient of Thermal Conductivity	ASTM C 177	BTU·in/hr·ft <sup>2</sup> ·°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
Shading Coefficient, Clear 0.125"	ASHRAE	–	1.02
Shading Coefficient, Gray, Bronze 0.125"	ASHRAE	–	0.7
U factor 0.236" (summer gain, winter loss)	NFRC 100-2010	BTU/hr·ft <sup>2</sup> ·°F	0.90, 0.96

# Makrolon® CQ sheet

## Impact Resistance\*



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

Distributed by:



Toll Free: 1.800.277.7898

[www.piedmontplastics.com](http://www.piedmontplastics.com)



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, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information 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 Covestro.

Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. 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 any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

With respect to health, safety and environment precautions, the relevant Material Safety Data Sheets (MSDS) and product labels must be observed prior to working with our products.