

## Description

**MAKROLON<sup>®</sup> GP** polycarbonate sheet is a polished surface, UV stabilized polycarbonate for use in glazing and industrial applications. Offering economy and high performance, MAKROLON GP polycarbonate sheet meets or exceeds the physical properties of any product in its class. MAKROLON GP polycarbonate sheet is backed by a five year warranty against breakage.

## Applications:

**MAKROLON GP** polycarbonate sheet is used extensively in school and factory glazing for protection against both accidental breakage and deliberate vandalism. In manufacturing environments, this high impact material excels in applications like machine guards, noise abatement shields, clear work station partitions, freight doors, and other in-plant glazing.

## MAKROLON<sup>®</sup> GP

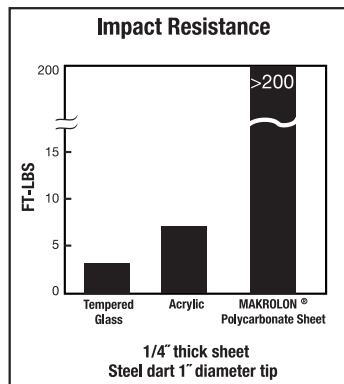
Typical Physical Properties			
Property	Test Method	Units	MAKROLON
<b>PHYSICAL</b>			
Specific Gravity	ASTM D792	-	1.2
Refractive Index @ 72°F	ASTM D542	-	1.586
Light Transmission, Clear 1/8"	ASTM D1003	%	86
Light Transmission, Gray/Bronze	ASTM D1003	%	50
Light Transmission, Dark Gray	ASTM D1003	%	18
Rockwell Hardness	ASTM D785	-	M70/R118
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)
Instrumented Impact, 1/8"	ASTM D3763	Ft-lbs	>45
Shear Strength, @ Yield	ASTM D732	psi	6000
Shear Strength, Ultimate	ASTM D732	psi	10000
Shear Modulus	ASTM D732	psi	114000
<b>THERMAL</b>			
Coefficient of Thermal Expansion	ASTM D696	In/in/F	3.75 x 10 <sup>-5</sup>
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
Brittle Temperature	ASTM D746	F	-200
Shading Coefficient, Clear 1/8"	ASHRAE	-	1.02
Shading Coefficient Gray, Bronze 1/8"	ASHRAE	-	0.7
U Value 1/4" (summer gain, winter loss)	-	-	0.90, 0.96

*Sheffield Plastics Inc. will not be responsible for the use of this information relative to actual application. Users must make their own determination of its suitability for their specific application. No warranty is made for the fitness of any product, and nothing herein waives any of the seller's conditions of sale.*

## CODE COMPLIANCE

MAKROLON polycarbonate sheet products satisfy major building code requirements for a CC-1 rating in construction applications (BOCA, ICBO, SBCCI, and Dade County). MAKROLON polycarbonate sheet products are listed with Underwriters Laboratories for the UL flammability standard and the UL972 standard for burglary resistant glazing materials. Additionally, MAKROLON polycarbonate sheet is approved for Consumer Product Safety Commission (CPSC 16CFR 1201) categories I & II and ANSI Z97.1-1984 Safety Glazing Standards.

	635	Inches	<1
Ignition Temperature, Self	ASTM D1929	F	1070
Ignition Temperature, Flash	ASTM D1929	F	870
UL 94, Clear @ .060"	UL 94	-	V2
UL 94, Clear @ .220"	UL 94	-	V0



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