



**LEHIGH VALLEY
PLASTICS**

We Shape The Industry

MAKROLON® GP

MAKROLON® 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.

Typical Physical Properties

Property	Test Method	Units	MAKROLON
PHYSICAL			
Specific Gravity	ASTM D792	-	1.2
Refractive Index @ 72°F	ASTM D542	-	1.586
Light Transmission, Clear 1/8fl	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
MECHANICAL			
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 @ 1/8fl	ASTM D256	Ft-lbs/in	12-16
Izod Impact Strength, Unnotched @ 1/8fl	ASTM D256	Ft-lbs/in	60 (No failure)
Instrumented Impact, 1/8fl	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
THERMAL			
Coefficient of Thermal Expansion	ASTM D696	In/in/F	3.75 x 10 ⁻⁵
Coefficient of Thermal Conductivity	ASTM C177	Btu-in/hr-ft ² -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 1/8fl	ASHRAE	-	1.02
Shading Coefficient Gray, Bronze 1/8fl	ASHRAE	-	0.7
U Value 1/4fl (summer gain, winter loss)	-	-	0.90, 0.96

IMPORTANT: The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Lehigh Valley Plastics, Inc. will not be held responsible for the use of this information relative to actual application.