

# Makrolon VIVAK Product Data



**VIVAK® Sheet** is a transparent thermoplastic sheet. In the point of purchase industry, VIVAK Sheet is the brand and market leader for all clear plastics. Among its advantages, VIVAK Sheet offers superior impact strength over acrylic and cost effectiveness compared to polycarbonate. VIVAK Sheet offers deep draws, complex die-cuts and precise molded-in details without sacrificing structural integrity. It die-cuts and punches easily and can be bonded or fastened with adhesives, ultrasonic welding or rivets. In addition, VIVAK Sheet is easily decorated by painting, silk screening, or hot stamping. Easy to fabricate, form, bond and decorate, VIVAK Sheet is well suited for a variety of point of purchase and sign applications.

## APPLICATIONS

Typical applications include video tape shelves, greeting card displays, revolving merchandise racks, indoor signs, point of purchase displays, menu displays, photo frames, and slat wall inventory displays.

## Typical Physical Properties

Property	VIVAK® Sheet	Units	Test Method
<b>GENERAL</b>			
Specific Gravity	1.27	-	ASTM D-792
Water Absorption after 24 hrs.	0.2	%	ASTM D-570
<b>MECHANICAL</b>			
Tensile Strength, Ultimate .125"	7,700	psi	ASTM D-638
Tensile Modulus .125"	320,000	psi	ASTM D-638
Flexural Strength .125"	11,200	psi	ASTM D-790
Flexural Modulus .125"	310,000	psi	ASTM D-790
Izod Impact Notched .125" at 73"	1.7	Ft-lb/in	ASTM D-256
Izod Impact Notched .125" at 32"	1.2	Ft-lb/in	ASTM D-256
Drop Dart Impact .250" at 73"	83	Ft-lbs	ASTM D-3763
Rockwell Hardness	115	R Scale	ASTM D-785
Shear Strength	9,000	psi	ASTM D-732
Compressive Strength	8,000	psi	ASTM D-895
<b>THERMAL</b>			
Heat Deflection Temperature @ 264 psi	157	°F	ASTM D-648
Heat Deflection Temperature @ 66 psi	164	°F	ASTM D-648
Coefficient of Thermal Expansion	3.8	In/in/°Fx10 <sup>-6</sup>	ASTM D-696
Flammability ? .080"	HB	-	UL 94
Glass Transition Temperature	178	°F	-
Forming Temperature	280-320	°F	-
<b>OPTICAL</b>			
Light Transmission	86	%	ASTM D-1003
Refractive Index	1.57	-	ASTM D-542
Haze	1.0	%	ASTM D-1003
<b>ELECTRICAL</b>			
Dielectric Constant, 1 kHz	2.6	-	ASTM D-150
Dielectric, 1 mHz	2.4	-	ASTM D-150
Dielectric Strength	410	v/mil	ASTM D-149

Recycle Code 2 Polyethylene Terephthalate Glycol Modified



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Compare VIVAK Sheet's performance for interior fabricated and formed applications. It delivers an optimum balance of performance and economy.

Performance Comparison			
Impact Strength Falling Dart @ 73" ASTM D-5420 @ .125"	Acrylic	Polycarbonate	VIVAK Sheet
10 in/lbs. 100 in/lbs. 300 in/lbs.	Failed Failed Failed	No break No break No break	No break No break No break
Heat Resistance @ 264 psi @ 66 psi Gamma Stability Chemical Resistance	190°F  Poor Poor	270°F 280°F Fair Fair	157°F 164°F Excellent Good

