

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