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Approved by J. S.

## Product

PermaFlex® PF6400

## Permacolor

The **Permacolor** system is a series of pressure sensitive products for mounting and overlaminating in the imaging industries. Pressure sensitive **Permacolor** provides fast, efficient processing through cold roll lamination techniques without the need for heat, drying or messy coating operations.

## Product Description

**PF6400** is a 3.75-mil clear polypropylene film with a textured gloss finish that helps to eliminate glare and provides a very unique and pleasing viewing surface with a permanent adhesive system. This product is recommended as a **short term** (up to one year), **low traffic area** overlaminate for indoor applications only. A 55# SCK release liner protects the adhesive.

**PF6400** can also be used as a short term (1 month) interior **Floor Graphic** laminate where wet conditions are not expected.

## Physical Properties

Property	Typical Values	Test Method
<b>Thickness, inches (µm)</b> Film plus adhesive	0.047 (120)	ASTM-D645
<b>Peel Adhesion lbs./in (N/25mm)</b> 180° on Glass - 20 min - 24 hrs.	1.5 (6.5) 2.0 (8.7)	PSTC - 1
<b>Static Coefficient of Friction (Slip Resistance)</b>	No longer specified for indoor dry applications.	
<b>Temperature Range</b> Application: End Use:	50°F to 100°F (10°C to 38°C) -40° to 180°F (-30° to 82°C)	
<b>Surface Burning Characteristics (Meets ANSI, NFPA, and IFC as class A)</b> Flame Spread Smoke Density	10 70	ASTM E84-01 or ANSI/NFPA 255 or IFC 8-1
<b>Adhesive pH</b>	Neutral	TAPPI-529

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## Durability

The indoor durability for this product is 1 month in floor graphic applications and 1 year for all other interior vertical applications.

## Shelf Life

Two years when stored between 60°F - 77°F (15°C - 25°C) and at 50% relative humidity or less.

## Chemical Resistance

Distilled Water (24 hr.)	No effect
Detergent (24hr)	No Effect
10% HCL (10min)	No effect
10% Ammonium Hydroxide (10min)	No effect
Gasoline (1 hr.)	No effect

## Limitations

- 1) **The user is responsible for determining the product's suitability, including adhesion and if needed, removal characteristics when used in applications other than listed specifically in this Performance Guide.**
- 2) **If there are any questions about applications, please contact your Mactac sales representative to discuss your requirements for recommendations.**
- 3) **If this is a printed Performance Guide it is an uncontrolled document. Please check the Mactac website for the latest, most up-to-date version**

## Recommendations

Mactac studies and field surveys with numerous customers using Permacolor® laminates in rolled-up graphic applications, leads to the following recommendations for rolling and shipping laminated images:

1. **Prior to rolling graphics:**
  - a) A 2 - 4 hour wet-out period is strongly recommended for the adhesive system to build to ultimate adhesion. This will significantly improve your success with rolled-up graphics.
  - b) This product can be used over UV inkjet and screen printed images. However, extra wet-out time is required to reduce silvering and build bond prior to rolling.
2. **For single-side laminated images:**
  - a) Roll laminated side in for shipping and storage.
  - b) An inside roll diameter of 3 - 5 inches, minimum, is recommended for graphics with *less than 10 mil total graphic thickness* (includes imaged media and Permacolor overlaminates).
  - c) For images with a *total thickness of 10 mils or greater* an inside roll diameter of 10 - 12 inches, minimum, is recommended.
3. **For images laminated on both front and back sides:**
  - a) Roll images with the thicker laminate to the inside for shipping and storage. For example: if your image has 5 or 10 mil polycarbonate or vinyl on the front and 15 mil Polycarbonate on the back (for additional stiffness), roll the graphic with the 15 mil PermaFlex® side in.

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- b) All double laminated images should be rolled with an inside roll diameter of 10 - 12 inches minimum. Remember that a larger inside diameter is better.

We recognize that different laminator's methods may produce different results. The recommendations above represent our experience as having the "greatest" success in the field; individual experience should not be discounted.

- *Values given are typical for unprocessed product and are not for use as specifications. Processing may change the values.*

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