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

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.

- 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.*

CALL 1-800-321-8834 for additional product information

IMPORTANT NOTICE: The information given and the recommendations made herein are based on our research and are believed to be accurate, but no guarantee of their accuracy or completeness is made. In every case, user shall determine before using any product in full scale production, or in any way, whether such product is suitable for user's intended use for their particular purpose under their own operating conditions. User assumes all risk and liability whatsoever in connection with their use of any product. The products discussed herein are sold without any warranty as to merchantability or fitness for a particular purpose, or any other warranty, express or implied. No representative of ours has any authority to waive or change the foregoing provisions, and no statement or recommendation not contained herein shall have any force of effect unless in an agreement signed by the officers of seller and manufacturer. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent without authority from the owner of the patent. The following is made in lieu of all warranties, express or implied: Seller's and manufacturer's only obligation shall be to replace or credit such quantity of the product proved to be defective at its discretion.

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