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Approved by J. S.

Product

PermaFlex® PF6300

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

The **PermaFlex® overlaminating films** is a family of relatively thick films that are coated with a pressure sensitive adhesive on one side. These unique films can be laminated to either one or both sides of photographic prints, transparencies and digital images to impart protection, surface texture and enough rigidity to eliminate the need for mounting to traditional flat substrates in many applications. These laminates also retain enough flexibility to allow images to be used in non-flat configurations such as cylindrical displays. This feature also permits the laminates to be rolled for easy shipping or storage.

PF6300 is a 5-mil clear PVC film with a lustre textured finish to eliminate glare and provide a very unique and pleasing viewing surface. This product can be used as an overlaminate for indoor and outdoor applications and wets out perfectly when used over UV inkjet and screen printed images.

PF6300 not only provides protection from abrasion and moisture, it also helps retard color fade caused by ultra violet (UV) light exposure.

PF6300 can also be used as a **Floor Graphic** laminate. It exceeds industry standards for slip resistance, when tested according BS7976-2.

Physical Properties

| Property | Typical Values | Test Method |
|---|----------------------|-------------|
| Thickness, inches (µm) Film plus adhesive | 0.00591 (150) | ASTM-D645 |
| Peel Adhesion lbs./in (N/25mm) 180° on Glass - 20 min - 24 hrs. | 5.0 (22) 5.5 (24) | FTM-1 |
| Quick Tack, lbs. /in² (N/25mm) Glass | 5.0 (22) | FTM-9 |
| Dimensional Stability % MD CD | 1.0 1.0 | FTM-14 |

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| | | |
|--|---|---|
| Determination of Slip Resistance (μm) Ra Dry Ra Wet | 49 32 | BS 7976-2: 2002 |
| Temperature Range Application: End Use: | 32°F to 120°F (0°C to 50°C) -22° to 140°F (-30° to 60°C) | |
| Surface Burning Characteristics (Meets ANSI, NFPA, and IFC as class A) Flame Spread Smoke Density | 5 45 | ASTM E84-01 or ANSI/NFPA 255 or IFC 8-1 |
| Adhesive pH | Neutral | TAPPI-529 |

Durability

In vertical applications ($90\pm 5^\circ$), the outdoor durability is 3 years in vertical applications and indoor durability is 5 years. On Floors; use indoor only, durability is 1 – 3 years depending on traffic.

All Permacolor overlaminating films have UV resistance built in to help extend the life of your image, the durability of the image is mainly dependent upon the quality of the inks (see technical data sheets given by the ink manufacturers) and pressure sensitive media being used.

Shelf Life

Two years when stored between 60°F - 77°F (15°C - 25°C) and at 50% relative humidity or less. *Note:* Mactac recommends that rolls be stored on end or suspended from the core.

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.

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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.

Please keep in mind that these are **recommendations**, individual experience should not be discounted. We recognize that different laminators and laminating methods may produce different results. The recommendations above represent our experience as having the “greatest” success in the field.

- *Values given are typical and are not necessarily for use in specification.*

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