

Version #9 (1120)
 Approved by J. S.

Product

PermaFlex® FloorGrip™ PF6600



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, slip resistance 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 2D configurations such as large cylindrical displays.

PF6600 is a 6-mil clear PVC film with a matte textured finish to eliminate glare and provide a very unique and pleasing viewing surface. This product can be used as an overlaminate for indoor as well as outdoor applications. **PF6600** is designed to be laminated to:

Photographic prints	Transparencies
UV and Solvent screen printed images	Solvent and eco-solvent inkjet prints
HP Latex inkjet prints	UV inkjet prints*
Water-based inkjet prints	Canon UVgel 356 prints

PF6600 not only provides protection from abrasion and moisture, it also helps retard color fade caused by ultra violet (UV) light exposure. PF6600 comes with an 83# Coated Kraft liner.

PF6600 is designed to be used as a **Floor Graphic** laminate on dry and **where floors can get wet**. It exceeds industry standards for slip resistance, Certified by the National Floor Safety Institute (NFSI) when tested according to ANSI/NFSI B103.1, B101.1 and in Europe when tested according to DIN 51130 and British Standard BS7976-2.

Physical Properties

Property	Typical Values	Test Method
Thickness, inches (µm) Film plus adhesive	0.007 (180)	ASTM-D645
Quick Tack, lbs. /in ² (N/25mm) Glass	3.2 (14)	FTM-9

Peel Adhesion lbs./in (N/25mm) 180° on Glass - 20 min - 24 hrs.	3.2 (14) 4.6 (20)	FTM-1
Dimensional Stability % MD CD	< 0.2 < 0.2	FTM-14
Temperature Range Application: End Use:	60°F to 90°F (15°C to 32°C) -22° to 160°F (-30° to 70°C)	
Surface Burning Characteristics Meets ANSI, NFPA, and IFC Flame Spread Smoke Density	Class B 40 75	ASTM E84-01 or ANSI/NFPA 255 or IFC 8-1
EU Flammability	Self-Extinguishing	ISO 3795
Adhesive pH	Neutral	TAPPI-529
Slip Resistance Dynamic Coefficient of Friction Pendulum Test US - Wet DCOF (Phase I) Wet SCOF (Phase II) EU- Slip Resistance - German Ramp BS- Slip Resistance (µm) Pendulum RA Dry RA Wet	Wet 0.43 Passed Dry 61 Low Slip Potential Wet 33 Moderate Slip Potential 0.48 Pass 0.60 High Traction R11 Manageable 49 Low slip potential 32 Moderate slip potential	ANSI A137.1/A326.3 AS/NZS 4586 AS/NZS 4586 NFSI B101.3 NFSI B101.1 DIN 51130 BS 7976-2

Durability

In vertical applications (90±5°): the outdoor durability is 3 years and indoor durability is 5 years.

On floors: the outdoor durability is 3 months to one year, depending on the weather conditions. The indoor durability is up to 3 years depending on foot traffic.

This information is based on successful real life experience and testing in a laboratory Weather-Ometer according to ISO 4892-3.

Note: Exposure to severe temperatures, ultra-violet light as well as conditions in Southern United States, tropical, sub-tropical or desert regions will cause more rapid deterioration. This also applies to polluted areas, high altitude and south facing exposure.

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

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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