



PERFORMANCE GUIDE

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Approved by J. S.

PRODUCT: **IMAGin[®] StreetRAP[™]**
STR328

PRODUCT DESCRIPTION:

STR328 is a 3.4-mil **matte opaque** white, PVC film designed for the production of **outdoor sidewalk and parking lot ‘floor’ graphics**. The product is coated on one side with a 3-mil thick, **aggressive, permanent**, blended acrylic/rubber pressure sensitive adhesive that bonds well to flat or slightly rough, pedestrian traffic surfaces like concrete and asphalt. The adhesive is protected with a 90# polycoated 2-side SuperFlat[™] liner. The film face is designed for excellent printability with solvent, eco-solvent, latex and UV-cured inkjet printers and is also printable with UV or solvent screen inks*. Combine **StreetRAP** with Permacolor[®] PF6300, a 5-mil textured PVC overlaminating film that exceeds ASTM C-1028 for slip resistance, for a complete **StreetRAP**.

StreetRAP combined with standard 2- to 3-mil overlaminating films is great for indoor concrete surfaces like support pillars and smooth to slightly rough concrete or cinder block walls or those tough to adhere to applications like the low surface energy plastics used in polyethylene trash and storage bins.

PHYSICAL PROPERTIES:

	<u>TYPICAL VALUES*</u>	<u>TEST METHOD</u>
Peel Adhesion , lb. /in. (N/25mm)		PSTC-1
180° on Stainless Steel - 30 min	7.0 (30)	(CTM-25)
- 24 hr.	8.0 (35)	
Quick Tack on SS , lb. /in ² (N/25mm)	7.5 (33)	PSTC-3
Shear , Hours to failure Stainless steel - 5# weight @ 72°F	200+	PSTC-7
Static Coefficient of Friction (CoF or Slip Resistance)		ASTM C 1028 **
For PF6300 5-mil overlaminating film (Required for a completed StreetRAP floor graphic)		ASTM / NFSI
<i>OSHA recommendations: Dry ≥ 0.5, Wet & Handicap accessible routes ≥ 0.6, Ramps ≥ 0.8</i>		
Dry Neolite	0.93	
Rubber	0.69	
Wet Neolite	0.67	
Rubber	1.16	
Dimensional Stability , (in)		MACTac CTM-21
48 hours @ 150°F	max. 0.05	10" x 10" Sample bonded to aluminum.
Temperature Ranges		
Minimum Application:	50°F (+10°C)	(see Application note 4b below)
End Use:	32°F to 225°F (0°C to 107°C)	
Surface Burning Characteristics		ASTM E84-01 or
Flame Spread	10	ANSI/NFPA 255 or
Smoke Density	25	UCB 8-1
Meets: ANSI Class A		
NFPA Class A		
UCB Class 1		

DURABILITY:

- 1) The outdoor durability of a completed **StreetRAP** floor graphic is up to 3 months for pedestrian traffic on smooth to slightly rough surfaces.
- 2) The outdoor durability of the unprinted film is 5 years on vertical surfaces.

PRINTING:

StreetRAP is intended for wide format, eco-solvent, solvent-based, latex and UV-cured inkjet printing as well as UV and solvent screen. To achieve the best possible print quality, please make sure that the correct ICC profiles or printer settings are used. Profiles can be obtained from our Distributors or can be downloaded from www.mactac.com. Printer and heater settings and ICC profiles can also be downloaded from some O.E.M. or software manufacturer's websites.

The ICC profiles are provided solely as a customer resource. Print environment, the individual nature of printing systems, inks and software can significantly affect output. It is the customer's responsibility to determine the suitability of any profile for use in their specific print environment.

* **UV inks;** when printing with UV inks, screen or inkjet, under-cure the inks to leave them slightly tacky and laminate immediately, before they post-cure, so the PF6300 overlaminating films will adhere. Failure to do this may result in a poor bond of the overlaminate and cause potential separation in the field.

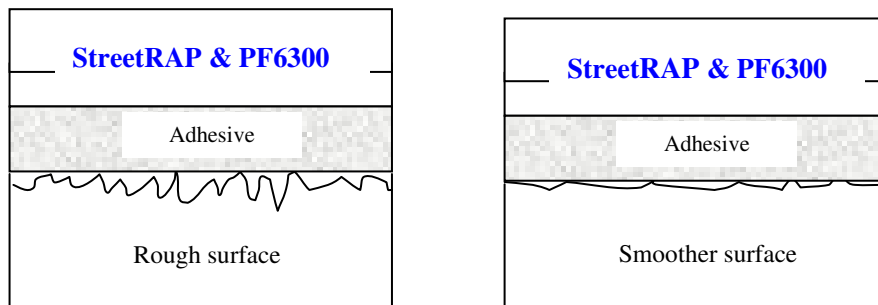
REMOVABILITY:

- 1) To remove; lift one edge, you may need a putty knife to get an edge started, and pull using short, quick tugs. Keep the angle low, (less than 45°) for best results.
- 2) Removal is much easier when done in the cool early morning hours. Do not use heat to assist in removal as heat will actually increase the bond of this adhesive.
- 3) If any residual adhesive residue is present after removal of the graphic, Citrus or solvent based-adhesive removers will clean the residue.

RECOMMENDATIONS:

Always test your combination of IMAGin products, inks and laminating films prior to commercial use.

- 1) **Printing Conditions:** Print in conditioned pressroom at $\pm 73^{\circ}\text{F}$ (23°C) and 50% RH. The maximum allowable ink saturation is 270%.
- 2) **Drying Requirements:** Solvent, Eco-solvent and Mild-solvent inkjet prints require 24 - 48 hr. drying time - open to the air. Inks do not dry when printed media is rolled up. The prints must be dry prior to lamination.
- 3) **Laminating Conditions:** Overlamination of the inkjet-printed material with **PERMACOLOR® PF6300** is required for slip resistant **StreetRAP**.
- 4) **Transportation Conditions:** To allow for easy transportation, **StreetRAP** series can be rolled up, with the image out, with a minimum diameter of 6 inches (15cm). During transportation or storage, avoid exposing them to extreme temperature and humidity changes.
- 5) **Application Requirements:** The surface must be ***absolutely dry***, clean and in reasonably good condition.
 - a) **StreetRAP** must be applied in dry weather to a dry surface at temperatures above 50°F (10°C) on days the temperature is expected to rise to at least 70°F (21°C). Heat helps the adhesive flow to the rough surface to create a better bond. Do not attempt to apply graphics late in the day when the temperature is expected to cool down.
 - b) The rougher the surface the less contact the adhesive will have and the less chance your graphic has for success.



Adhesive contact is much better on smoother surfaces!

- c) To clean the surface, use a brush or stiff bristle broom to remove dirt and dust, sand and gravel or other loose contaminants. Do not use water or cleaners which will cause the surface to become wet.
- d) Bridge graphics over seams if needed; do not force the graphic down into the seam.
- e) Once aligned, pull back 1-2 inches of the liner to expose the adhesive to align and start the application. Remove 6 - 10 inches of liner at a time and using a firm squeegee or a firm, short bristle brush with

- very firm pressure, forcing the adhesive down into the surface. Continue with 6 - 10 inches at a time to eliminate air bubble, complete the application.
- f) Once complete go back over all edges again to make sure they are in full contact to the surface.
 - g) If possible trim sharp corners to a rounded radius to help minimize edge lifting.
 - h) On rougher surfaces use heat and pressure to conform at least 1" of the graphic edge down into the surface.
 - i) If needed, use a 1" overlap to seam the graphic. Do not have multiply layers of overlap on your graphic. This creates excessively high levels which may result in trips, falls and injuries. Stagger your overlaps as necessary.

LIMITATIONS:

- 1) **StreetRAP** is not intended to be used as a conformable wall wrapping film.
- 2) **StreetRAP** used on sealed concrete may result in a **permanent application** and will not be easily removed. Always test first in an inconspicuous area.
- 3) **StreetRAP** on varnished surfaces and soft walls like stucco or drywall will **damage** the surface upon removal. Always test first in an inconspicuous area.
- 4) **StreetRAP** is **not** designed for use with vehicular traffic. Short term applications, like for special events or parades that last a couple days are acceptable. However, at the end of the special event immediately remove the graphic before regular traffic resumes.
- 5) **StreetRAP** used on some concrete surfaces, typically with newly poured concrete, may fail due to efflorescence which is beyond MACTac's control and therefore no claim for successful application or removal is made by MACTac in this instance. **Efflorescence** is a powdery white material that forms on the surface of the concrete and is caused by calcium hydroxide which is naturally in the concrete after it sets. *As water moves out of the concrete it carries with it some of this calcium hydroxide, which then reacts with carbon dioxide in the air to become calcium carbonate*, then coating the PS adhesive resulting in failure of the graphic from the concrete.
- 6) **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.**
- 7) **If there are any questions about applications, please contact your MACTac sales representative to discuss your requirements for recommendations.**
- 8) **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.**

*** SLIP RESISTANCE STANDARDS:**

Various standards-making authorities have developed different methods for evaluating the slip-resistance characteristics of walkway materials. Organizations' including the American Society of Testing and Materials (ASTM), the American National Standards Institute (ANSI), and the National Floor Safety Institute (NFSI), has established different slip-resistance test protocols. The standard, ASTM C-1028, is the newest, most consistent, CoF (Coefficient of Friction) test protocol and one of the few to be approved for testing on wet surfaces.

SHELF LIFE:

2 year from D.O.M. when stored at 60/77°F (15/25°C) and 50% relative humidity in the original package.

- *Values given are typical and are not necessarily for use in specification.*
- *Product reinforced with 2-mil polyester during adhesion tests.*

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CALL 1-800-401-5005 or visit www.mactac.com 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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