



MATERIALS FOR INKJET

DESCRIPTION EFFECT FILMS – RIGID PVC COPOLYMER FILMS PRODUCT CODE: MVEFXS3162IN0610/9.1



PRODUCT DESCRIPTION:

Vinylefx™ Decorative series is a metallized vinyl film with a pressure sensitive adhesive which is digitally printable with eco solvent inks, solvent inks and UV inks for indoor and short term (12 months maximum, suggest protection like a clear liquid coating or PSA overlaminating film) outdoor applications. Can also be used for screen printing, hot stamping, doming or adhesive bonding and no additional surface treatment is necessary for this. Surface treatment is necessary for water based dye & pigment inks.

PRODUCT COMPOSITION:

- Face Film: **Rose Gold Smooth** 75µm Rigid PVC Copolymer film with real metal on the back.
- Adhesive: 23µm Clear acrylic pressure sensitive adhesive.
- Liner: 125gsm Kraft paper on 610mm width and 145gsm Kraft paper on 1220mm width

PRINTING, CUTTING AND INSTALLATION INSTRUCTIONS:

- Good dimensional stability with minimal shrinkage.
- Dry application only to clean, smooth, non-porous, flat surface at a room temperature of 21°C. (Vinylefx™ has a real metal on the back of the vinyl and wet application will cause the metal to oxidant)
- ICC printer profile: White Intermediate High Gloss Vinyl at low temperature (35-40°C) to prevent tunneling and edge curling. Using high temperature during the heating process to cure inks can cause Vinylefx™ films to expand and contract on the release liner. Should you be using UV curing lamps, reduce the heat level and increase belt speed should the temperature exceed 65°C because high temperature might cause the film to distort and shrink.
- 3-6mm Border (adjust to graphic size) for contour cutting to prevent edge lifting. Do not cut into printed image - heavy concentration of ink will also contribute to shrinking and curling of the vinyl. Edge sealing or coating with a UV or automotive clear, or applying a PSA UV overlaminating film can extend durability and is necessary in demanding applications.
- Resist most marring and staining, and print, cut, weed and handle just like intermediate vinyl.
- Cutting pressure is one step up to intermediate vinyl at a slightly slower cutting speed.
- Vinylefx™ films will not conform well around compound curves or rivets.
- Vinylefx™ films will not adhere well to untreated low-energy surfaces such as polyethylene and polypropylene.
- Some clear coats and automotive paints contain additives to repel dirt, grime, graffiti etc., which also cause adhesive problems. Some paints contain wax and silicone, which can also cause adhesion problems.
- Metalized films are not recommended for application to untreated metal surfaces. Dissimilarity of metals can result in galvanic corrosion.
- When applying Vinylefx™ to another vinyl, only a premium cast vinyl is recommended. The plasticizers in intermediate vinyls could cause bubbles and adhesion problems.

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- Allow enough drying time, 24-48 hours, if not out gassing will occur and cause bubbles underneath the vinyl. Test don't guess. Always test the vinyl with the ink system for compatibility prior to production!
- A limited number of gel spots is inherent in the vinyl extrusion process.
- The film come with an impression (shim line) in the pattern, this is not a defect but byproduct of the manufacturing process.

PHYSICAL SPECIFICATIONS:

CHARACTERISTIC	METHOD	UNIT	VALUE
Physical Properties			
• Specific Gravity	D-792	---	1.35
• Tensile Strength	D-882	psi	5,100
• Elongation	D-882	%	70
• Tensile Modulus	D-638	psi	360,000
• Izod Impact Strength	D-256	ft.-lb/in	1.1
• Tear Strength	D-1004	lb/in	500
• Water Absorption	D-570	%	.04
• Falling Dart Impact (.010)	---	In-lb, lb/mil	1.4
• Flexural Yield Strength	---	psi	10,000
• Adhesion to steel	---	N/25mm	13 – 19 N/25mm
Optical			
• Transmittance	D-1003	%	89
• Haze	D-1003	%	1.9
Thermal			
• Heat Distortion	D-648	°C	79.4
• Heat Sealing Range	---	°C	143.3-154.4
• Flammability	(UL-94)	Rating	94 V-o
• Thermal Range	---	°C	(1.7-60)
• Maximum Work Range	---	°C	121
• Brittleness Temperature	---	°C	-34.4
• Release Value	---	---	20-40 gr/in
• Application Temperature Range	---	---	16°C to 32°C
• Service Temperature Range	---	---	-22°C to 74°C
Electrical			
• Dielectric Strength	D-149	Volts/mil	350
• Dielectric Constant 60Hz	D-150	---	3.2 – 4.2
Chemical			
• Rigid PVC Films are resistant to acids, alkalis, most oils, fats and Alcohol. In general, aromatics, hydrocarbons, ketones and esters will cause swelling.			

STORAGE INSTRUCTIONS:

In order to avoid any loss of quality, the M-Jet material should be stored in the following conditions:

- Temperature: 10 - 30 °C
- Relative Humidity 35 - 65 %