

Technical Data Sheet

Laser Printable Polyester Film

This specification is intended to outline the physical and chemical properties of *PANDUIT*'s pressure sensitive laser printable polyester material and include the following part numbers and printable material identifiers:

Part Number Prefixes		
PLL-*-Y2S	PEL-*-Y2Y	
PLL-*-Y2Y	PEL-*-Y1	
PLL-*-Y3	PEL-*-Y3M	

Printable Material Suffixes		
YML		

PRODUCT SPECIFICATIONS:

Description:	Material is RoHS compliant (European Union directive 2002/95/EC). Material is top coated to provide a laser printable surface. This material is halogen free.
Print Methods:	This material is recommended for laser printing.
Adhesive:	Acrylic based, pressure sensitive permanent adhesive.
Standard Colors:	Yellow, Matte Silver and Matte Clear
Thickness:	3.0+/- 0.4 mils (substrate and adhesive) - Yellow 3.5 +/- 0.4 mils (substrate and adhesive) – Matte Silver 2.0 +/- 0.3 mils (substrate and adhesive) – Matte Clear
Service Temperature Range:	-65°F to 275°F (-54°C to 135°C)
Minimum Application Temperature:	50°F (10°C)
Storage Conditions:	Store at 70°F (21°C) and 50% Relative Humidity.

PROPERTIES:**PERFORMANCE:**

Peel Adhesion to Stainless Steel:	35 oz/in width (PSTC-101, 15 min. dwell)										
Shear Adhesion:	24+ hours (PSTC-107, Procedure A)										
Tensile Strength:	MD 48 +/- 4.8 lbs./inch width (PSTC-131) TD 74 +/- 7.4 lbs./inch width (PSTC-131)										
Elongation:	MD 80% +/- 15% (PSTC-131) TD 75% +/- 15% (PSTC-131)										
UV Resistance:	*3000 hours no change observed (ASTM G154)										
Elevated Temperature Exposure:	After 8 hours at 150°F (65.5°C) there was no deterioration of the substrate										
Immersion Resistance:	Printed samples were applied to stainless steel panels and immersed in "Isopar 'L' and Isopar 'M' solutions to determine if the printing would smear or if the adhesive would degrade.										
	<table> <thead> <tr> <th>Immersion Time</th> <th>Visual Changes</th> </tr> </thead> <tbody> <tr> <td>10 minutes</td> <td>None</td> </tr> <tr> <td>30 minutes</td> <td>None</td> </tr> <tr> <td>60 minutes</td> <td>None</td> </tr> <tr> <td>24 hours</td> <td>None</td> </tr> </tbody> </table>	Immersion Time	Visual Changes	10 minutes	None	30 minutes	None	60 minutes	None	24 hours	None
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*3000 hours equates to 5 years of assimilated outdoor UV exposure.

CHEMICAL/SOLVENT RESISTANCE:

Test performed according to PSTC-101, ASTM D-543-87, and ASTM D-896-90.

The testing was conducted at room temperature and performed with reference to the above test methods. The samples were cut 1" wide, applied to stainless steel panels, and conditioned for 24 hours. The samples were then immersed in the specified reagents for 5 immersions using the following cycle: a 10 minute immersion time followed by a 30 minute recovery time. After the fifth immersion, the samples were conditioned for 24 hours before testing. Percent retention of performance was based on a 48 hour adhesion value of 58 oz/inch for the yellow GMY2 film, 67 oz/in for the silver GMY2 film, and 62 oz/in. for the clear GMY2 film. Table 1 shows test results for the yellow GMY2 film. Table 2 shows test results for the silver GMY2 Film. Table 3 shows test results for the clear GMY2 film.

Table 1 GMY2 Yellow Polyester Film

Chemical Reagent	Visual Observation	Percent Retention of Performance
Distilled Water	No effect	100%
Mineral Spirits	No effect	103%
Toluene	Slight adhesive bleed, coating slightly dissolved	94%
Isopropyl Alcohol	Slight adhesive bleed	89%
Methanol	Coating slightly dissolved	100%
Acetone	Slight adhesive bleed, coating slightly dissolved	89%
Methyl Ethyl Ketone	Slight adhesive bleed, coating completely dissolved	86%
1,1,1 Trichloroethane	Slight adhesive bleed	94%
Freon TF	No effect	92%
Super Agitene	No effect	100%
Jet-A Fuel	No effect	92%
Arco TruSlide 68	No effect	111%
SAE 30 Motor Oil	No effect	108%

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Table 2 GMY2 Silver Polyester Film

Chemical Reagent	Visual Observation	Percent Retention of Performance
Distilled Water	No effect	100%
Mineral Spirits	Loss in print density	86%
Toluene	Coating dissolved	100%
Isopropyl Alcohol	No effect	100%
Methanol	No effect	110%
Acetone	Coating dissolved	86%
Methyl Ethyl Ketone	Coating dissolved	95%
1,1,1 Trichloroethane	Coating dissolved	105%
Freon TF	No effect	95%
Super Agitene	No effect	86%
Jet-A Fuel	No effect	90%
Arco TruSlide 68	No effect	110%
SAE 30 Motor Oil	No effect	95%
Hexane	Slight Adhesive Bleed	61%

Technical Data Sheet**Table 3 GMY2 Clear Polyester Film**

Chemical Reagent	Visual Observation	Percent Retention of Performance
Distilled water	No effect	96%
Mineral Spirits	No effect	91%
Toluene	Slight adhesive bleed, coating slightly dissolved	75%
Isopropyl alcohol	No effect	98%
Methanol	No effect	88%
Acetone	Slight adhesive bleed, coating slightly dissolved	78%
Methyl Ethyl Ketone	Slight adhesive bleed, coating slightly dissolved	80%
1,1,1 Trichloroethane	No effect	91%
Freon TF	Coating slightly dissolved	112%
Super Agitene	No effect	104%
Jet A Fuel	No effect	83%
Arco Truslide 68	No effect	91%
SAE 30 Motor Oil	No effect	96%

PSTC: Pressure Sensitive Tape Council (U.S.A.)
ASTM: American Society for Testing and Materials (U.S.A.)

APPROVALS:

UL Recognized: **UL969** File numbers: **MH 14576 Yellow, MH 14979 Clear/Silver**
CUL Recognized: **C22.2 No. 0.15-01** File numbers: **MH 14576 Yellow, MH 14979 Silver**

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