High Tack Thermal Transfer Printable Polyester Film

This specification is intended to outline the physical and chemical properties of *PANDUIT*'s pressure sensitive high tack thermal transfer printable polyester material and include the following printable material identifiers:

Printable Material Suffixes			
YPT	YQT-P	YUT-P	Y9T-P
YPT-P	YRT-P	YVT-P	YP1
Y0T	YST-P	YWT-P	YX1
Y0T-P	YTT-P	Y8T-P	YZ1
YPC	A*1		

PRODUCT SPECIFICATIONS:

Description:	Material is RoHS compliant (European Union directive 2002/95/EC). Material is a top coated polyester film with a pressure sensitive adhesive.
Print Methods:	This material is recommended for thermal transfer printing.
Adhesive:	Rubber based, pressure sensitive high tack permanent adhesive
Standard Colors:	Various colors
Thickness:	3.9 +/- 0.3 mils (substrate and adhesive)
Service Temperature Range:	-40°F to 302°F (-40°C to 150°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:	100 oz/in width minimum (PSTC-101, 15 min. dwell)
Shear Adhesion:	24 hours minimum (PSTC-107, modified Procedure A)
Tensile Strength:	MD 36 +/- 3.6 lbs./inch width (PSTC-131) TD 41 +/- 4.1 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

***3000 hours equates to 5 years of assimilated outdoor UV exposure.**

PROPERTIES FOR SOLAR APPLICATION: **PERFORMANCE:**

Short term low temperature exposure:	30 days at -51C, no visible change observed
Short term high temperature exposure:	30 days at 93C, no visible change observed
Relative Lightfastness and weatherability:	1000 hours, no change observed (ASTM D3424, Method 4)
Tensile Strength:	MD: 10114 PSI (ASTM D3759)
Elongation:	MD: 90% (ASTM D3759)
Tack:	12.6 N (ASTM D2979)
Flammability:	16 seconds (ASTM D1000)
Adhesion:	154.0 oz/in (ASTM D3330)

CHEMICAL/SOLVENT RESISTANCE:

The testing was conducted at room temperature. Samples were orange/red (flexo) preprinted and thermal transfer printed with Panduit RMR*BL/RMER*BL ribbon on the Panduit TDP43MY/TDP43ME printer. Separate sets were conditioned for 24 hours before being immersed in the following solvents for a period of 1 hour and 24 hours. After the samples were removed from the immersed solvents, they were rubbed 10 times with a lint free gauze. Visual observations were noted for any smear or loss of legibility.

1 Hour Immersion

Chemical/Solvent	Visual Observation	
	Ribbon only	Colored Flexo Ink
Jet Fuel	No change	No change
Gasoline	Loss in print density	No change
Methyl Ethyl Ketone	Loss in print density	Orange/red ink removed
1:1:1 TCE	Loss in print density	Orange ink removed
Trichloroethylene	Loss in print legibility	Orange/red ink removed
409 Cleaner	No change	No change
Alpha Flux 200L	No change	No change

24 Hours Immersion

Chemical/Solvent	Visual Observation	
	Ribbon only	Colored Flexo Ink
Isopropyl Alcohol	No change	Orange ink removed
Water 150°F	No change	No change
Salt Water	No change	No change
SAE 30 Motor Oil	No change	No change
Hydraulic Fluid	No change	No change
Skydrol	Loss in print legibility	Orange ink removed
Methanol/Water	No change	No change

Ethylene Glycol	No change	No change
ASTM #3 Oil	No change	No change

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

APPROVALS

UL Recognized: UL969	File number: MH 14979
CUL Recognized: C22.2 No 0.15-01	File number: MH 14979