Thermal Transfer Printable Clear Polyester Film

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

Part Number Prefixes		
TCT-*YCL	C*X*SL1-OL	
TTP*-CLR		
TTC*YC		
TTC-EFPLC-1		

Printable Material Suffixes		
YKC-*	YKT	
YK6	YK6Y	
YK1		

PRODUCT SPECIFICATIONS:

Description:	Material is RoHS compliant (European Union directive 2002/95/EC). Material is a top coated clear polyester film with a pressure sensitive adhesive. This material is halogen free.
Print Methods:	This material is recommended for thermal transfer printing.
Adhesive:	Acrylic based, pressure sensitive permanent adhesive.
Standard Colors:	Clear
Thickness:	1.8 +/- 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.
	For cassette products do not exceed 95°F.

PROPERTIES:	PERFORMANCE:
Peel Adhesion to Stainless Steel:	30 oz/in width (PSTC-101, 72 hour dwell)
Shear Adhesion:	100+ hours (PSTC-107, Procedure A)
Tensile Strength:	MD: 23 +/- 2.3 lbs./inch width (PSTC-131)
Elongation:	MD: 200% +/- 15% (PSTC-131)
UV Resistance:	*3000 hours no change observed (ASTM G154)
Elevated Temperature Exposure:	After 24 hours at 160°F (71°C) there was no deterioration of the substrate
Tack:	150 gm (ASTM D-2979)

***3000 hours equates to 5 years of assimilated outdoor 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: 10974 PSI (ASTM D3759)
Elongation:	MD: 84% (ASTM D3759)

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Tack:	4.8N (ASTM D2979)
Flammability:	2.5 seconds (ASTM D1000)
Adhesion:	16.0 oz/in (ASTM D3330)

CHEMICAL/SOLVENT RESISTANCE:

The testing was conducted at room temperature. Samples were thermal transfer printed with Panduit RMR*BL/RMER*BL and RMR*WH /RMER*WH ribbons on Panduit TDP43MY/TDP43ME printers. 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
Jet Fuel	No change
Gasoline	Loss of print legibility
Methyl Ethyl Ketone	Loss of print legibility
1:1:1 TCE	Loss of print legibility
Trichloroethylene	Loss of print legibility
409 Cleaner	No change
Alpha Flux 200L	No change

24 Hours Immersion

Chemical/Solvent	Visual Observation
Isopropyl Alcohol	Loss of print legibility
Water 150F	No change
Salt Water	No change
SAE 30 Motor Oil	No change
Hydraulic Fluid	No change
Skydrol	Loss of print legibility
Methanol/Water	No change
Ethylene Glycol	No change
ASTM #3 Oil	No change

APPROVALS

UL Recognized: UL969	File number: MH 14576, MH 14979
CUL Recognized: C22.2 No 0.15-01	File number: MH 14979

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