

**Technical Data Sheet****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	Y*1
YPT-P	YRT-P	YVT-P	AJC (Flag Label)
Y0T	YST-P	YWT-P	AJT (Flag Label)
Y0T-P	YTT-P	Y8T-P	AJM (Flag Label)
YPC	A*1	Y9T-P	

**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 visual change observed for both white and colored labels (ASTM G154). 3000 hours equates to 5 years of assimilated outdoor UV exposure  5000 hours no visual change observed for white but significant fade observed for colored labels but print still legible (ASTM G154).  10,000 hours slight yellowing observed for white, complete fade for colored labels but print still legible (ASTM G154)
Elevated Temperature Exposure:	After 8 hours at 150°F (65.5°C) there was no deterioration of the substrate

**Technical Data Sheet**

---

**PROPERTIES FOR SOLAR****APPLICATION:**

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)

**PERFORMANCE:****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
Isopropyl Alcohol 40%	No change	Orange ink removed
Jet Fuel	No change	No change
Gasoline	Loss in print density	No change
Methyl Ethyl Ketone	Loss in print density	Orange/red ink removed
Trichloroethylene	Loss in print legibility	Orange/red ink removed
409 Cleaner	No change	No change
Alpha Flux 200L	No change	No change

**Technical Data Sheet**

---

**24 Hours Immersion**

Chemical/Solvent	Visual Observation	
	Ribbon only	Colored Flexo Ink
Isopropyl Alcohol 40%	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 for all part number suffixes except AJM. (AJM has no UL or CUL approvals)

UL Recognized: UL969 MH14979

CUL Recognized: C22.2 No 0.15-01 MH14979

**Technical Data Sheet****PROPERTIES FOR HARSH WASHDOWN ENVIRONMENT (with overlamine film)**

Meets the requirements of Ingress protection rating standard DIN 40050-9, IP69K for labels used in harsh wash-down and high pressure spray applications, common to the food and beverage industries.

**CHEMICAL RESISTANCE TEST all component labels except Flag Labels:**

Samples were printed with RMER4BL ribbon on Panduit TDP43ME printer and overlaminated with a clear film (T225X000YK1 or T425X000YK1). These samples were adhered to stainless steel panels and immersed in the following solvents. Testing consisted of 10 cycles of 10 minutes immersion followed by a 20 minute recovery period. After final immersion, visual observations were noted for any smear or loss of legibility.

CHEMICAL/SOLVENT	TEMPERATURE	Print	Adhesive
Enforce LP	50°C	No change	No change
HD PL-10 Plus	RT	No change	No change
Heavy Duty Acid LC-30	70°C	No change	No change
Soil Off II	50°C	No change	No change
Madisan 75	RT	No change	No change
Vortexx	50°C	No change	No change
XY-12	RT	No change	No change

**LIMITED WARRANTY**

All *PANDUIT* Identification Solution Products (except for Software programs) are warranted to be free from defects in material and workmanship at the time of sale but our obligation under this warranty is limited to replacement of the product proved to be defective within 6 months from the date of sale, or in the case of printers, within 90 days from the date of sale. This warranty is void if the products or printers are modified, altered or misused in any way. Use of *PANDUIT* printers with any product other than the specified *PANDUIT* products for which the printer was designed constitutes misuse. Before using, the user shall determine the suitability of the product for its intended use and user assumes all risk and liability whatsoever in connection therewith. The foregoing may not be altered except by an agreement signed by officers or seller and manufacturer.

NEITHER *PANDUIT* OR SELLER SHALL BE LIABLE FOR ANY OTHER INJURY, LOSS OR DAMAGE, WHETHER DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OF, OR THE INABILITY TO USE THE PRODUCT OR THE PRINTER.

THIS WARRANTY IS MADE IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OF PARTICULAR USE ARE SPECIFICALLY EXCLUDED.

The information contained in this literature is based on our experience to date and is believed to be reliable. It is intended as a guide or use by persons having technical skill at their own discretion and risk. We do not guarantee favorable results or assume any liability in connection with its use. Dimensions contained herein are for reference purposes only. This publication is not to be taken as a license to operate under, or a recommendation to infringe any existing patents. This supersedes and voids all previous literature, etc.