

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 | Y9T-P |
| YPT-P | YRT-P | YVT-P | Y*1 |
| Y0T | YST-P | YWT-P | AJC (Flag Label) |
| Y0T-P | YTT-P | Y8T-P | AJT (Flag Label) |
| 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.**

Technical Data Sheet**PROPERTIES FOR SOLAR****PERFORMANCE:****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) |

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 |

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|-----------------|-----------|-----------|
| 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

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:

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 |

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