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Technical Data Sheet

Thermal Transfer Printable Polyvinyl Fluoride Film

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

Part Number Prefixes		
TTC*T		

Printable Material Suffixes		
TJT		

PRODUCT SPECIFICATIONS:

Description:	Material is RoHS compliant (European Union directive 2002/95/EC). Material is a self-extinguishing, top coated polyvinyl fluoride film with a pressure sensitive adhesive.
Print Methods:	This material is recommended for thermal transfer printing.
Adhesive:	Acrylic based, pressure sensitive permanent adhesive.
Standard Colors:	White
Thickness:	2.5 +/- 0.3 mils (substrate and adhesive)
Service Temperature Range:	-40°F to 225°F (-40°C to 106°C). Test at 275°F have shown acceptable results.
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:	20 hours (PSTC-107, Procedure A)
Tensile Strength:	MD 12 +/- 1.2 lbs./inch width (PSTC-131)
Elongation:	MD 250% +/- 20% (PSTC-131)
Elevated Temperature Exposure:	After 24 hours at 160°F (70°C) there was no deterioration of the substrate
Flammability:	Passes the Federal Motor Vehicle Safety Standard (FMVSS-302)
	Average burn time less than 10 seconds (ASTM D1000)
Tack:	320 g/cm^2 (ASTM D-2979-88)
UV Resistance:	*3000 hours no change observed (ASTM G154)

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

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CHEMICAL/SOLVENT RESISTANCE:

The testing was conducted at room temperature. Samples were 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 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	No change
Methyl Ethyl Ketone	Loss of print legibility
1:1:1 TCE	Loss of print density
Trichloroethylene	Loss of print density
409 Cleaner	No change
Alpha Flux 200L	No change

24 Hours Immersion

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

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Chemical/Solvent Resistance:
Test was 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 and 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 min. Immersion time followed by a 30 min. 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 42 oz/in.

Chemical/Solvent	Visual Observation	Percent Retention of Performance
Distilled water	No effect	103%
Mineral Spirits	No effect	88%
Toluene	No effect	88%
Isopropyl Alcohol	No effect	100%
Methanol	No effect	100%
Acetone	Slight adhesive bleed	76%
Methyl Ethyl Ketone	No effect	92%
1,1,1 TCE	No effect	100%
Freon TF	No effect	103%
Super Agitene	No effect	96%
Jet A Fuel	Slight adhesive bleed	65%
Arco Truslide 68	No effect	92%
SAE 30 Motor Oil	No effect	108%

APPROVAL

UL Recognized: UL969 File Number: MH 14576, MH 14979

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