

Technical Data Sheet**Panduit GMH2 Film Lamination**

This specification is intended to outline the physical and chemical properties of *PANDUIT*'s GMH2 material and include the following printable material identifiers:

Printable Material Suffixes		
Y6T	AFT	Y7C
Y7T	AET	
AIT	ACT	
AGT	Y6C	

PRODUCT SPECIFICATIONS:

Description:	Material is RoHS compliant (European Union directive 2002/95/EC). GMH2 consists of a topcoated 2 mil polyester film laminated to a 8.0 mil polyolefin film. This material is halogen free.
Print Methods:	This material is recommended for thermal transfer printing.
Standard Colors:	White, Yellow, Red, Orange, Gray, Blue and Green.
Thickness:	10.0 +/- 0.5 mils
Service Temperature Range:	-58°F to 221°F (-50°C to 105°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:**

Tensile Strength:	MD: 70 +/- 7.0 lbs./inch width (PSTC-131) TD: 80 +/- 8 lbs./inch width (PSTC-131)
Elongation:	MD: 65% +/- 10% (PSTC-131) TD: 45% +/- 10% (PSTC-131)
UV Resistance:	*3000 hours no visual change observed for both white and colored tags (ASTM G154). 5000 hours no visual change observed for white but significant fade observed for colored tags but print still legible (ASTM G154). 10,000 hours no change observed for white, complete fade for colored tags but print still legible (ASTM G154) *3000 hours equates to 5 years of assimilated outdoor UV exposure.
Tear-Propagation Resistance:	MD: 250 gms (8.8 oz) (ASTM D1938) TD: 325 gms (11.5 oz) (ASTM D1938)
Humidity Resistance:	30 days at 100°F(37°C) and 95% R.H, no visible change observed
Abrasion Resistance:	CS-10 wheels/250 gm wt/50 cycles, no visible change observed

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Long Term High Service Temp:	30 days at 212°F (100°C), no visible change observed. Significant browning of the material observed when exposed for 4 hours at 250°C (482°F)
Long Term Low Service Temp:	30 days at -40°F (-40°C), no visible change observed.

CHEMICAL/SOLVENT RESISTANCE:

The testing was conducted at room temperature. Samples were thermal transfer printed with Panduit RMR*BL , RMER*BL black ribbon and RMR*WH, RMER*WH white 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 for White Tag with RMR*BL/RMR*BL black ribbon	Visual Observation for Colored Tags with RMER*BL/RMR*BL black ribbon	Visual Observation for Colored Tags with RMER*WH/RMR*WH white ribbon
Jet Fuel	No change	No change	No change
Gasoline	Loss of print legibility	Loss of print legibility	Loss of print legibility
Methyl Ethyl Ketone	Loss of print legibility	Topcoat dissolves	Topcoat dissolves
1:1:1 TCE	No change	Topcoat dissolves	Topcoat dissolves
Trichloroethylene	Loss of print legibility	Topcoat dissolves	Topcoat dissolves
409 Cleaner	No change	No change	No change
Alpha Flux 200L	No change	No change	No change
Toluene	Loss of print density	Topcoat dissolves	Topcoat dissolves
3% Alconox	No change	No change	No change
10% Sodium Hydroxide	No change	No change	Topcoat dissolves
10% Sulfuric Acid	No change	No Change	No change
Degreaser	No change	Loss of print legibility	Loss of print legibility
30% Hydrochloric Acid	No change	No change	No change
30% Sodium Carbonate	No change	No change	No change

Technical Data Sheet**24 Hour Immersion**

Chemical/Solvent	Visual Observation for White Tag with RMR*BL/RMR*BL black ribbon	Visual Observation for Colored Tags with RMR*BL/RMR*BL Black ribbon	Visual Observation for Colored Tags with RMR*WH/RMR*WH white ribbon
Isopropyl Alcohol	No change	Loss of print legibility	Loss of print legibility
Water 150F	No change	No change	No change
Salt Water	No change	No change	No change
SAE 30 Motor Oil	No change	No change	No change
Hydraulic Fluid	No change	No change	No change
Skydrol	Loss of print density	Top coat dissolves	Topcoat dissolves
Methanol/Water	No change	No change	No change
Ethylene Glycol	No change	Loss of print legibility	Loss of print legibility
ASTM #3 Oil	No change	No change	No change

MIL-STD-202G, Method 215K, Solution A, C and D:

3 cycles of three minute immersions in specified fluids followed by toothbrush rub after each immersion. Print still legible in all test fluids for white tag with RMR*BL/RMR*BL black ribbon but illegible for all colored tags with RMR*, RMR*BL black ribbon and RMR*WH white ribbon.

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