

TECHNICAL DATA SHEET

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Document number: TTDS-075
Issue: 3
Date: June 2003

HM high tack metalized polyester

MATERIAL DESCRIPTION:	Tyco "HM" is a thermal transfer printable metalized polyester film with a high tack permanent acrylic adhesive.
USE:	Ideal for rating plates and other labels requiring a "metal" look. The 'high-tack' adhesive is designed to bond to the most demanding surfaces including textured and contoured surfaces. For guaranteed print performance and durability, use with Tyco's RHD series ribbon.
PRINT METHOD/RIBBON:	Preferred Printer/Ribbon combination: Thermal Transfer: T308S-PRINTER, Tyco 1330-0607-10 Ribbon Alternative Printer/Ribbon combinations: Thermal Transfer: T312S-PRINTER, Tyco 1330-0607-10 Ribbon Thermal Transfer: T312M-PRINTER, Tyco 1330-0607-10 Ribbon Thermal Transfer: T200 Series, Tyco 1330-3300-101TT Ribbon Thermal Transfer: T400 Series, Tyco 1330-0607-10 Ribbon Dot Matrix: AM6310, Tyco 1892BK04-RIBBON
SHELF LIFE:	2 years when stored at 21°C (70°F) at 50% R.H.
ADHESIVE:	'High-tack' permanent acrylic
COLOR:	Bright silver
APPROXIMATE TOTAL THICKNESS:	Facestock: 0.051mm (0.0020 in) Adhesive: 0.046mm (0.0018 in) Liner: 0.038mm (0.0015 in)

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ADHESION: ASTM-D-3330 (180° peel direction), 10minute dwell at 21°C (70°F):
 Stainless Steel: typical failure at 96N/100mm (88oz/in)
 Polycarbonate: typical failure at 98N/100mm (90oz/in)
 Polypropylene: typical failure at 80N/100mm (73oz/in)
 HDPE: typical failure at 59N/100mm (54oz/in)
 Smooth Powder coating: typical failure at 93N/100mm (85oz/in)
 Finely Textured Powder coating: typical failure at 54N/100mm (49oz/in)
 Glass: typical failure at 102N/100mm (93oz/in)

SERVICE TEMPERATURE: -40° C to 150° C (-40° F to 302° F)

MINIMUM APPLICATION TEMPERATURE: 10°C (50°F)

SOLDER IMMERSION: After 10-second immersion at 250°C (480°F) in molten solder: slight yellowing, print remains legible.

FLAMMABILITY: UL94 rating 94VTM-2, slow to self extinguish

UV TRANSMISSIBILITY: < 0.01%

ABRASION RESISTANCE: Print remains legible for 100 revolutions of CS-10 wheels with 500 gram load (Taber-Abraser Model 5130). Print remains legible after repeated rub testing as per AS-81531

CHEMICAL SOAK RESISTANCE: Excellent resistance with minimal edge penetration:
 Samples soaked in fluids for four hours at room temperature, unless otherwise stated. Samples applied to stainless steel panels 24 hours prior to immersion and evaluated one hour after removal from the fluids. Adhesion measured at 180° peel angle per ASTM D3330. Typical Results:

<u>Chemical</u>	<u>Adhesion</u>	<u>Effect</u>	<u>Edge Penetration</u>
Isopropyl alcohol	96N/100mm	No change	0.6mm
Detergent	101N/100mm	No change	1.3mm
Engine Oil	112N/100mm	No change	0.6mm
Water (48 hours)	73N/100mm	No change	0.1mm

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Toluene	55N/100mm	No change	5.2mm
Acetone	65N/100mm	No change	4.9mm
Brake Fluid	107N/100mm	No change	0.1mm
Gasoline	61N/100mm	No change	4.6mm
Diesel Fuel	102N/100mm	No change	0.7mm
Hydraulic Fluid	105N/100mm	No change	0.0mm

PRINT PERFORMANCE:

Good resistance to fluids- see below Samples printed using Tyco recommended ribbons. All tests conducted at room temperature unless otherwise stated

SOLVENT	TEST	EFFECT
IPA	7 day immersion	No visual effect
Water	7 day immersion	No visual effect
Engine Oil at 250°F (121°C)	48 hour soak	No visual effect
Engine Coolant at 200°F (93°C)	4 hour soak	No visual effect

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