



# 7810E 3M TT3 MW PET50-300E-65WG

## Thermal Transfer Polyester Label Material

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### Product Data Sheet

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<b>Issued</b>	:	<b>May 2006</b>
<b>Supersedes</b>	:	<b>June 2004</b>

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#### Physical Properties

Not for specification purposes  
(Calipers are nominal values)

<b>Facestock</b>	56 micron Matte Radiant White polyester
<b>Adhesive</b>	20 micron 300E Acrylic
<b>Liner</b>	56 micron, 62 g/m <sup>2</sup> White Densified Glassine
<b>Shelf Life</b>	24 months from date of manufacture of product when properly stored between 22°C and 50% relative humidity.

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#### Features:

- TT3 Matte topcoat provides the advantages of matte coating combined with a surface that is smooth enough for thermal transfer printing. High abrasion resistance combined with excellent chemical resistance of the thermal transfer image, even against aggressive chemicals like Brake fluid. Resin ribbons are recommended for optimum durability. The topcoat also provides improved ink anchorage for traditional forms of press printing
- 300E adhesive bonds well to a wide variety of substrates including metals, high surface energy (HSE) plastics and low surface energy (LSE) plastics. It is ideal for applications requiring high initial adhesion especially to LSE plastic surfaces.
- 62 g/m<sup>2</sup> densified glassine liner assures consistent die cutting.
- UL and cUL recognized (File Number MH18072)

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#### Application Ideas:

- Barcode labels and rating plates.
- Property identification and asset labelling in harsh environments.
- Warning, instruction, and service labels for durable goods.
- Nameplates for durable, electronic and sporting goods.

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**Performance Characteristics**  
 Not for specification purposes

Adhesion	90°Peel Adhesion, Test procedure FTM 2			
	Initial (20 Minute Dwell/RT)		Ultimate Adhesion 72 Hours Dwell at 70° C	
	N/10mm	Oz/In	N/10mm	Oz/In
Aluminium	4.2	38	5.6	50
Stainless Steel	4.5	41	5.6	50
Phenolic	4.3	39	5.4	48
ABS	4.6	41	5.5	50
Polycarbonate	5.0	45	5.3	48
Polystyrene	4.7	42	5.1	46
Polypropylene	4.4	40	4.7	42
HD Polyethylene	3.0	27	3.6	32
LD Polyethylene	3.5	32	3.4	31
Powder Coating	3.0	27	5.2	47

Surface	Conditioned for 3 Days at - 40°C	
	90° Peel	
	N/10mm	Oz/In
Aluminium	4.3	39
Stainless Steel	4.9	44
Phenolic	4.7	42
ABS	5.2	47
Polycarbonate	5.0	45
Polystyrene	5.0	45
Polypropylene	4.8	43
HD Polyethylene	3.5	32
LD Polyethylene	5.0	45
Powder Coating	4.0	36

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**Performance  
 Characteristics Contd.**

<b>Temperature Resistance</b>	149°C for 24 hours:	no significant visual change 0.7% MD shrinkage 0.9% CD shrinkage
	-40°C for 3 days:	no significant visual change
<b>Humidity Resistance</b>	24 hours at 38°C and 100% relative humidity	no significant changes in appearance or adhesion

<b>Environmental Performance</b>	The properties defined are based on four hour immersions at room temperature 22°C unless otherwise noted. Samples were applied to stainless steel panels 24 hours prior to immersion and were evaluated one hour after removal from the solution for peel adhesion. Adhesion measured at 90° peel angle (FTM 2) at 305 mm/min.			
<b>Chemical Resistance</b>	<b>Adhesion to Stainless Steel</b>		<b>Appearance</b>	<b>Edge Penetration</b>
<b>Chemical</b>	<b>N/10mm</b>	<b>Oz/In</b>	<b>Visual</b>	<b>Millimetres</b>
Heptane	3.8	34	No change	5
Petrol	3.2	29	No change	4
Diesel	4.8	43	No change	1
SAE 15W40 Engine Oil	5.5	50	No change	0
Dot 4 Brake Fluid	5.6	50	No change	0
Screen Wash	7.0	63	No change	0
IPA	5.3	48	No change	1
Toluene	3.1	28	No change	5
MEK	3.2	29	No change	5
Lemsolve	5.0	45	No change	2
Teepol Detergent	3.6	32	No change	0
PH 4	7.0	63	No change	0
PH 10	6.6	59	No change	0
409 Solution	6.4	58	No change	0

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## Agency Listing Information

### Thermal Transfer Printing:

UL and cUL recognized with the following thermal transfer ribbons

Armor: AXR-8, AXR600, AXR7+  
 Ricoh™: B110CR, B110CX, B120EC  
 Sony™: TR 4570, TR 5070, TR6070, TR6075  
 Astromed R5, RY  
 Kurz: K501  
 Zebra: 4800, 5095, 5100

## Processing

### Printing:

Facestock is topcoated for improved ink receptivity and is designed for thermal transfer printing. It is printable by all standard roll-processing methods including flexography, hot stamp, letterpress, and screen-printing.

### Die Cutting:

Rotary die cutting is recommended. Fanfolding of labels is not recommended. Small labels should be evaluated carefully. Winding tensions should be kept at a minimum to help prevent the adhesive from oozing

### Packaging:

Finished labels should be stored in plastic bags.

## Special Considerations

For maximum bond strength, the surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol.

**NOTE:** When using solvents, read and follow the manufacturer's precautions and directions for use.

For best bonding conditions, application surface should be at room temperature or higher. Low temperature surfaces, below 5°C can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds can be achieved through increased rubdown pressure.

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