



7871EJ- 3M TT2 GW PET 50-350E/46-90DWG

Thermal Transfer Polyester Label Material

Product Data Sheet

Issued December 2002
Supersedes None

Physical Properties
Not for specification purposes
(Calipers are nominal values)

Facestock	50 micron Gloss Radiant White polyester
Adhesive	46 micron #350 E Acrylic
Liner	77 micron, 90 g/m ² White Double sided Glassine
Shelf Life	24 months from date of manufacture of product when properly stored between 22°C and 50% relative humidity.

Features:

- Facestock is topcoated for thermal transfer printing. Resin ribbons are recommended for optimum durability. The topcoat also provides improved ink anchorage for traditional forms of press printing.
- 350 E 3M's most universal labelstock adhesive ,excellent adhesion, even on Low surface energy substrates combined with excellent temperature and chemical Resistance.
- 46 micron adhesive coat weight for excellent adhesion to textured surfaces
- 90 g/m² double sided glassine liner assures consistent die cutting, a backside release coating helps minimise label blocking.
- UL and cUL approvals pending

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	6.9	62	9.4	85
Stainless Steel	7.4	67	11.0	99
Phenolic	6.8	61	8.5	77
ABS	6.9	62	8.9	80
Polycarbonate	7.1	64	8.2	74
Polystyrene	6.9	62	7.5	68
Polypropylene	5.4	49	7.3	66
HD Polyethylene	4.1	37	5.1	46
LD Polyethylene	5.4	49	5.8	52
Powder Coating	6.3	57	9.2	83

Surface	Conditioned for 3 Days at - 40°C	
	90° Peel	
	N/10mm	Oz/In
Aluminium	6.3	57
Stainless Steel	8.0	72
Phenolic	6.8	61
ABS	7.5	68
Polycarbonate	7.4	67
Polystyrene	7.5	68
Polypropylene	6.4	58
HD Polyethylene	4.0	36
LD Polyethylene	5.1	46
Powder Coating	7.7	69

Performance Characteristics Contd.

Temperature Resistance	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
Humidity Resistance	24 hours at 38°C and 100% relative humidity	no significant changes in appearance or adhesion

Environmental Performance	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.			
Chemical Resistance	Adhesion to Stainless Steel		Appearance	Edge Penetration
Chemical	N/10mm	Oz/ln	Visual	Millimetres
Heptane	8.2	74	No change	3
Petrol	6.0	54	No change	3
Diesel	6.1	55	No change	1
SAE 15W40 Engine Oil	7.4	67	No change	0
Dot 4 Brake Fluid	7.8	70	No change	1
Screen Wash	7.1	64	No change	0
IPA	6.8	61	No change	1
Toluene	5.2	47	No change	4
MEK	5.4	49	No change	4
Lemsolve	6.2	56	No change	2
Teepol Detergent	7.4	67	No change	0
PH 4	6.6	59	No change	0
PH 10	7.2	65	No change	0
409 Solution	6.6	59	No change	0

Agency Listing Information

Thermal Transfer Printing:

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Suitable for thermal transfer printing with the following thermal transfer ribbons

- Armor: AXR 8
- Ricoh™: B110 CX
- Sony™: TR 5070
- Astromed R5, RY
- Kurz 501

Press Inks:

For details of inks compatible with this labelstock that meet the requirements of both UL, please contact your local technical service engineer.

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. Care should be taken when handling finished rolls to prevent telescoping. Please refer to Technical Service Bulletin Guide to converting 3M label Materials with 350E adhesive.

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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Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

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Tapes & Adhesives Group

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3M United Kingdom PLC
3M House, PO Box 1,
Market Place,
Bracknell, Berkshire,
RG12 1JU

Product Information :
Tel 0870 60 800 50
Fax 0870 60 700 99

3M Ireland
3M House, Adelphi Centre,
Upper Georges Street,
Dun Laoghaire, Co. Dublin,
Ireland

Customer Service :
Tel (01) 280 3555
Fax (01) 280 3509