



7870E High Durability Thermal Transfer Polyester Label Material

Provisional Product Data Sheet

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(Provisional)**
Supersedes : **New**

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

Facestock	51 micron Matte White Radiant Polyester
Adhesive	27 micron #350E Acrylic
Liner	77 micron, 90 g/m ² White Densified 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 with a high durability matte top coat capable of withstanding harsh chemicals encountered in both automotive and electronic environment
- When printed with specific ribbons, thermal transfer image remains legible after rubbing with Brake Fluid, Diesel Fuel, Electronic Fluxes and Toluene
- 350E adhesive is 3M's most universal adhesive for label materials. It can permanently bond to high surface energy (HSE) and low surface energy (LSE) plastics, contoured surfaces and powder coatings. It has excellent chemical resistance and holding strength even at high temperatures
- 90 g/m² densified glassine liner assures consistent die cutting.

Application Ideas:

- Barcode labels and rating plates.
 - Property identification and asset labelling.
 - Warning, instruction, and service labels for durable goods.
 - Nameplates for durable 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 Room Temperature 23°C	
	N/10mm	Oz/In	N/10mm	Oz/In
Aluminium	2.7	25	3.8	35
Polycarbonate	3.4	31	4.9	45
Polypropylene	3.2	29	4.6	42
ABS	3.6	33	4.5	41
Nylon	3.5	32	4.3	39
Perspex	3.2	29	4.2	38

Chemical and Solvent Immersion
 4 hour immersion at 23°C

	Adhesive Appearance	Top Coat Appearance
Heptane	No Effect	No Effect
Diesel Fuel	No Effect	No Effect
Brake Fluid	No Effect	No Effect
Toluene	Slight edge penetration	No Effect
Engine Oil SAE 15W40	No Effect	No Effect
Screen Wash	No Effect	No Effect
IPA	No Effect	No Effect
MEK	Slight edge penetration	No Effect
Lemsolve	Slight edge penetration	No Effect
Forane HCFC	Slight edge penetration	No Effect

Temperature Resistance

149°C for 24 hours:	no significant visual change 0.7% MD shrinkage 0.8% 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
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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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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 Centre, Cain Road,
Bracknell, Berkshire,
RG12 8HT

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