



# 853 Polyester Tape (Transparent)

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## Product Data Sheet

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Updated : March 1996  
Supersedes : October 1993

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**Product Description** A transparent polyester film backing and an exceptionally solvent resistant acrylic adhesive system.

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**Physical Properties**  
Not for specification purposes

<b>Adhesive Type</b>	Acrylic	
<b>Backing</b>	0.02mm Polyester film.	
<b>Thickness</b> (ASTM D-3652)	50 µm	
<b>Tape Colour</b>	Transparent	
<b>Shelf Life</b>	12 months from date of despatch by 3M when stored in the original carton at 21°C (70°F) & 50 % Relative Humidity	

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**Performance Characteristics**  
Not for specification purposes

<b>Adhesion to Stainless Steel</b> ASTM D-3330	5.2 N/10mm	
<b>Tensile Strength</b> ASTM D-3759	42.1 N/10mm	
<b>Elongation at Break</b> ASTM D-3759	102 %	
<b>Temperature Range</b> Maximum Minimum	175 °C -50 °C	
<b>Water Vapour Transmission Rate</b>	24.8 gms water/m <sup>2</sup> /24hrs.	

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**Additional Product Information**

Adhesive bond will increase to most surfaces upon ageing.

Not recommended to exceed one year under normal storage conditions at 21°C and 50% R.H.

**SOLVENT RESISTANCE**

**ADHESION TO 24st ALUMINIUM  
(applied 72 hrs. before immersion)**

24hrs. immersion distilled water.	3.3 N/10mm
72hrs. immersion lubricating oil. jet engine (MIL-0-6081).	3.3 N/10mm
72hrs. immersion hydraulic oil (MIL-I-0-5606).	3.3 N/10mm
72hrs. immersion hydraulic fluid non-flammable (MIL-F-7083).	3.3 N/10mm
72hrs. immersion non-petroleum base aircraft hydraulic fluid (MIL-H-8446).	3.3 N/10mm
72hrs. immersion jet engine fuel (MIL-F-5624 grade JP4).	3.3 N/10mm
24hrs. immersion aromatic fuel (MIL-H-3136, Type II).	3.3 N/10mm
24hrs. immersion lube oil (MIL-L-7807) at 200°F (93°C).	3.3 N/10mm

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**Application Techniques**

Best results are attained when applied to a clean, dry and non dusty surface above 0°C.

To improve adhesion ensure firm and even application pressure is applied.

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**Applications**

Critical splicing applications.

Solvent resistant masking.

Quality protective laminate.

Tape hinge.

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**FEATURES**

**ADVANTAGES**

**BENEFITS**

Polyester backing.

Remains flexible from -50°C to 175°C.

Reduces failure due to embrittlement.

Thermal resistance.

Reduces failure due to film shrinkage and adhesive exposure.

Acrylic adhesive.

Extremely high chemical and solvent resistance.

Protects against failure due to undercutting or adhesive softening.

Firm, long ageing, non-yellowing.

Reduces failure caused by adhesive oozing and loss of tack.

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## Specifications

Resistant to penetration (MIL-I-7798A): This criterion to determine its suitability as a dissimilar metal insulator, found that it has excellent insulation properties up to 160°C. This value is probably higher except that this is the maximum limit of the testing equipment.

Printable on the adhesive side and by the "Print Seal" method on the backing side.  
NOTE: When laminated to printed No. 852, No. 853 can be qualified to meet requirements on MIL-T-9906A, Amendment I for non-corrosive heat, cold and solvent resistant identification marking tape in aircraft and missiles.

Can be qualified to meet Fed. Spec. L-T-100a, Type I.

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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.



## Specialty Tapes & Adhesives

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