



# Removable Foam Tape 4658F

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## Product Data Sheet

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Updated : Sept 2002

Supersedes : May 1997

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### Product Description

4658F Removable Foam Tape is a clear, high performance pressure sensitive adhesive tape. This unique adhesive is designed for bonding plastic materials to themselves as well as to a variety of other substrates that require good holding power with clean removability.

Its conformable nature allows for rapid rate of strength build-up, reaching between 50 and 80% of its ultimate adhesion within the first 10 minutes.

**Note: 3M 4658F can reach high bond strengths and some substrates may become difficult to remove.**

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### Physical Properties

Not for specification purposes

<b>Adhesive Type</b>	Acrylic
<b>Thickness</b> (ASTM D-3652) Tape	0.8mm
<b>Release Liner</b>	Filmic (Clear)
<b>Tape Colour</b>	Clear
<b>Shelf Life</b>	12 months from date of despatch by 3M when stored in the original carton at 20°C & 50 % Relative Humidity

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### Performance Characteristics

The test data has been generated with limited samples and should not be used for specification purposes.

<b>Substrates</b>	<b>Peel Adhesion - N/10mm</b>	
	90° Peel at Room Temperature Jaw speed 300mm per minute	
<b>Stainless Steel</b>	10 mins	15.8
	24 hours	27.1
<b>Rigid PVC (Foamex)</b>	10 mins	14.4
	24 hours	24.0
<b>Polycarbonate</b>	10 mins	16.4
	24 hours	24.0
<b>Acrylic</b>	20 mins	15.3
	24 hours	24.7
<b>Polyethylene</b>	20 mins	1.1
	24 hours	1.14
<b>Glass</b>	20 mins	23.3
	24 hours	37.7

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**Performance Characteristics (Contd)**  
Not for specification purposes

<b>Temperature Performance</b> Max : Minutes / Hours Max : Days / Weeks Minimum	100°C	
	80°C	
<b>Application Temperature</b>	10°C to 25°C	
<b>UV Resistance</b> (10 days exposure QUVA)		
Samples pre-bonded to Glass, UV exposure through glass	Excellent	
<b>Humidity Resistance</b> (10 days at 38°C/98% RH)	No drop in peel strength	
<b>Plasticiser Resistance</b>	Poor (not recommended)	

**Additional Product Information**

**Area of Tape Required** 100 cm<sup>2</sup> (16 sq.ins) to hold 1Kg static load at room temperature

**Foamex® E12.700 (Exhibition Grade)**

Typical weights and tape required:

Thickness	Weight per M <sup>2</sup> (Kg)	Tape Required (cm <sup>2</sup> )	Length required using 25mm width tape (cm)
2mm	1.4	140	56
3mm	2.1	210	84
4mm	2.8	280	112
5mm	3.5	350	140
6mm	4.2	420	168
8mm	5.6	560	224
10mm	7.0	700	280

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<b>Surfaces</b>	<p>Laboratory tests have shown 4658F Removable Foam Tape to have excellent attachment to a wide range of surfaces. Clean removability is also possible from most of these surfaces.</p>	<p>Low cohesive strength surfaces, such as painted surfaces, blown vinyl and plasterboard may delaminate on removal.</p>	<p>The tape should be tested to ensure the product is suitable for the intended use.</p>
	<p><b>Acceptable surfaces:</b></p> <ul style="list-style-type: none"> <li>- Foamex</li> <li>- Glass/Mirrors</li> <li>- Metal</li> <li>- Acrylic</li> <li>- Ceramic tiles</li> <li>- Wood</li> <li>- Plastic (NOT including low surface energy plastics)</li> <li>- Brick</li> <li>- Plaster/cement</li> <li>- Chipboard</li> </ul>	<p><b>Low cohesive strength surfaces</b></p> <ul style="list-style-type: none"> <li>- Wood chip wallpaper</li> <li>- Blown vinyl</li> <li>- Plasterboard</li> <li>- Fabric and cloth</li> <li>- Emulsion painted wallpaper</li> <li>- Painted surfaces</li> </ul>	<p>Care should be taken with wood veneers and highly polished wood furniture. Since any reactions with the surface may leave an 'image'</p> <p>Not recommended on plasticised PVC</p>
<b>Application Techniques</b>	<p>1. Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure develops better adhesive contact &amp; thus improves bond strength.</p>	<p>2. To obtain optimum adhesion, the bonding surfaces must be clean dry and well unified. A typical surface cleaning solvent is isopropyl alcohol &amp; water. Use proper safety precautions for handling solvents.</p>	<p>3. Ideal tape application temperature range is 10°C to 25°C</p> <p>4. Ensure clear liner is removed from tape prior to bonding to second substrate.</p>
<b>Removal Techniques</b>	<p>Use the removal tool to prise apart rigid substrates, then peel SLOWLY to remove completely.</p>	<p><b>Note: 3M 4658F can reach high bond strengths and some substrates may become difficult to remove.</b></p>	<p>For flexible surfaces peel back slowly to ensure clean removal.</p> <p>To remove tape from substrate, pull back corner and peel off quickly.</p>

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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.



#### Tapes & Adhesives

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