



# VHB™ Acrylic Foam Tape 4646F

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## Product Data Sheet

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Updated : May 2004  
Supersedes : Sept 2002

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### Product Description

4646F is a dark grey double coated acrylic foam tape with a high tack acrylic adhesive. This tape has a plain red filmic liner.

The excellent temperature performance enables bonding of materials prior to processing in a powder coating line

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### Physical Properties

Not for specification purposes

<b>Adhesive Type</b>	Acrylic
<b>Foam Core</b>	Acrylic
<b>Thickness (ASTM D-3652) Tape</b>	0.6. mm ± 0.1mm
<b>Release Liner</b>	Red Filmic
<b>Tape Colour</b>	Dark Grey
<b>Foam Density</b>	840 kg/m <sup>3</sup>
<b>Shelf Life</b>	24 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

Not for specification purposes

<b>Peel Adhesion to Stainless Steel</b> 90° peel @ room temp, 72 hr dwell, jaw speed 300mm/min AFERA 4001 (modified)	20 N/10mm	
<b>Static Shear Strength</b> weight held for 100 hours to stainless steel with ½ sq in (3.23 sq cm) overlap	1000g @ 20°C 500g @ 70°C	
<b>Temperature Performance</b> Continuous	90 °C	
Intermittent	150 °C	

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### Additional Product Information

This product is suitable for plasticised PVC but is not suitable for low surface energy plastics.

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### Application Techniques

1. Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure develops better adhesive contact & thus improves bond strength.

2. To obtain optimum adhesion, the bonding

surfaces must be clean dry and well unified. A typical surface cleaning solvent is isopropyl alcohol & water. Use proper safety precautions for handling solvents.

3. Ideal tape application temperature range is 21°C to 40°C.

Initial tape application to surfaces at temperatures below 10°C (50°F) is not recommended because the adhesive becomes too firm to adhere readily. However once properly applied low temperature holding is generally satisfactory.

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### Applications

4646F is a high performance double coated acrylic foam product which possesses a good balance between shear peel and high tack adhesion. It has been designed to be suitable for a range of bonding applications which require a level of adhesion higher than standard double coated foam tapes but perhaps lower than higher performance 3M VHB™ tapes.

Typical applications include:

- Bonding roof bows on trucks and buses
- Signage applications

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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 Group

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