

# 3M VHB™ Structural Glazing Tape G/B23F

## Product Data Sheet

June 2010

Supersedes: November 2009

### Product Description

3M™ VHB™ Structural Glazing Tape G/B23F is a high performance double-coated pressure sensitive acrylic foam tape. It is used to attach glass to metal frames in curtain wall systems and commercial windows replacing commonly used structural silicone sealants or mechanical fasteners and gaskets. Application history since 1990 and 3rd party test results demonstrate the outstanding performance, durability, UV and temperature resistance of 3M™ VHB™ Tape acrylic foam chemistry.

### Application Requirements

All 3M™ VHB™ Structural Glazing Tape projects must be reviewed on a project-specific basis by a 3M representative to begin the structural glazing process. 3M™ VHB™ Structural Glazing Tape Sales and Technical Service Representatives are available to assist the customer to determine the suitability of 3M™ VHB™ Structural Glazing Tape for structural glazing applications.

### Physical Properties

|                                |  |
|--------------------------------|--|
| <b>Adhesive Type</b>           | High Performance Acrylic                     |
| <b>Adhesive Carrier</b>        | Conformable Acrylic Closed Cell Foam         |
| <b>Thickness</b><br>AFERA 5006 | 2.3 mm ± 10 %                                |
| <b>Foam Density</b>            | 720 kg/m <sup>3</sup>                        |
| <b>Tape Colour</b>             | B23F: Black surface, grey core<br>G23F: Grey |
| <b>Liner</b>                   | 0.125 mm Red Polyethylene Film               |

### Performance Characteristics

|  |              |
|--|--------------|
| <b>Peel Adhesion</b><br>(stainless steel, ASTM D 3330)         | 440 N/100 mm |
| <b>Tensile Strength</b><br>(aluminium T-block, ASTM D 897)     | 480 kPa      |
| <b>Dynamic Overlap Shear</b><br>(stainless steel, ASTM D 1002) | 450 kPa      |
| <b>Static Shear</b><br>(stainless steel, ASTM D 3654)          |              |
| 22 °C, 1000 g/3.2cm <sup>2</sup>                               | > 10,000 min |
| 66 °C, 500 g/3.2cm <sup>2</sup>                                | > 10,000 min |
| 93 °C, 500 g/3.2cm <sup>2</sup>                                | > 10,000 min |
| <b>Solvent Resistance</b>                                      | Medium       |
| <b>UV Resistance</b>   | Excellent    |
| <b>Temperature Resistance</b>                                  |              |
| Short Term: (minutes, hours)                                   | 150 °C       |
| Long Term: (days, weeks)                                       | 93 °C        |

temperature. Contact 3M for more information.

- Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Flat bonding surfaces and firm application pressure develops better adhesive contact and helps improve bond strength. Generally, this means that the tape should experience at least 100 kPa in roll down, vacuum or platen pressure. 3M must approve pressure application equipment for 3M™ VHB™ Structural Glazing Tape applications.
- After final bonding of the parts, immediate handling strength is achieved and glazed units can be moved as there is no curing mechanism in this process. However, the bond strength will continue to increase as the adhesive flows onto the surface. At room temperature, approximately 50 % of the ultimate strength will be achieved in 10-20 minutes after pressure application, 90 % after 24 hours and 100 % after 72 hours. The use of a primer may accelerate the bond strength build rate. Contact 3M for more information.

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**Storage**

Store 3M™ VHB™ Structural Glazing Tape G/B23F in original cartons at 21°C and 50% relative humidity.

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**Shelf Life**

3M™ VHB™ Structural Glazing Tape G/B23F has a shelf life of 24 months from date of manufacturing by 3M.

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**For Additional Information**

To request additional product information or to arrange for sales assistance, please see below for contact details.

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**Important Notice**

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law

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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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