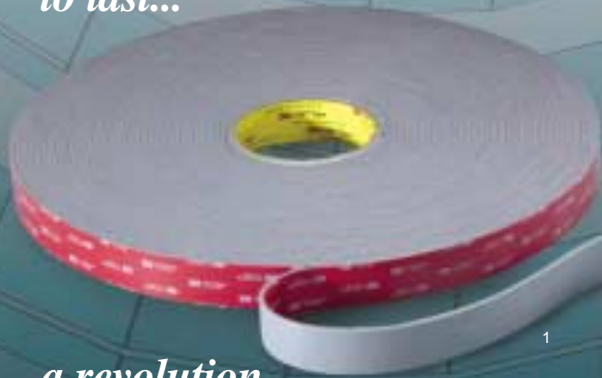


3M

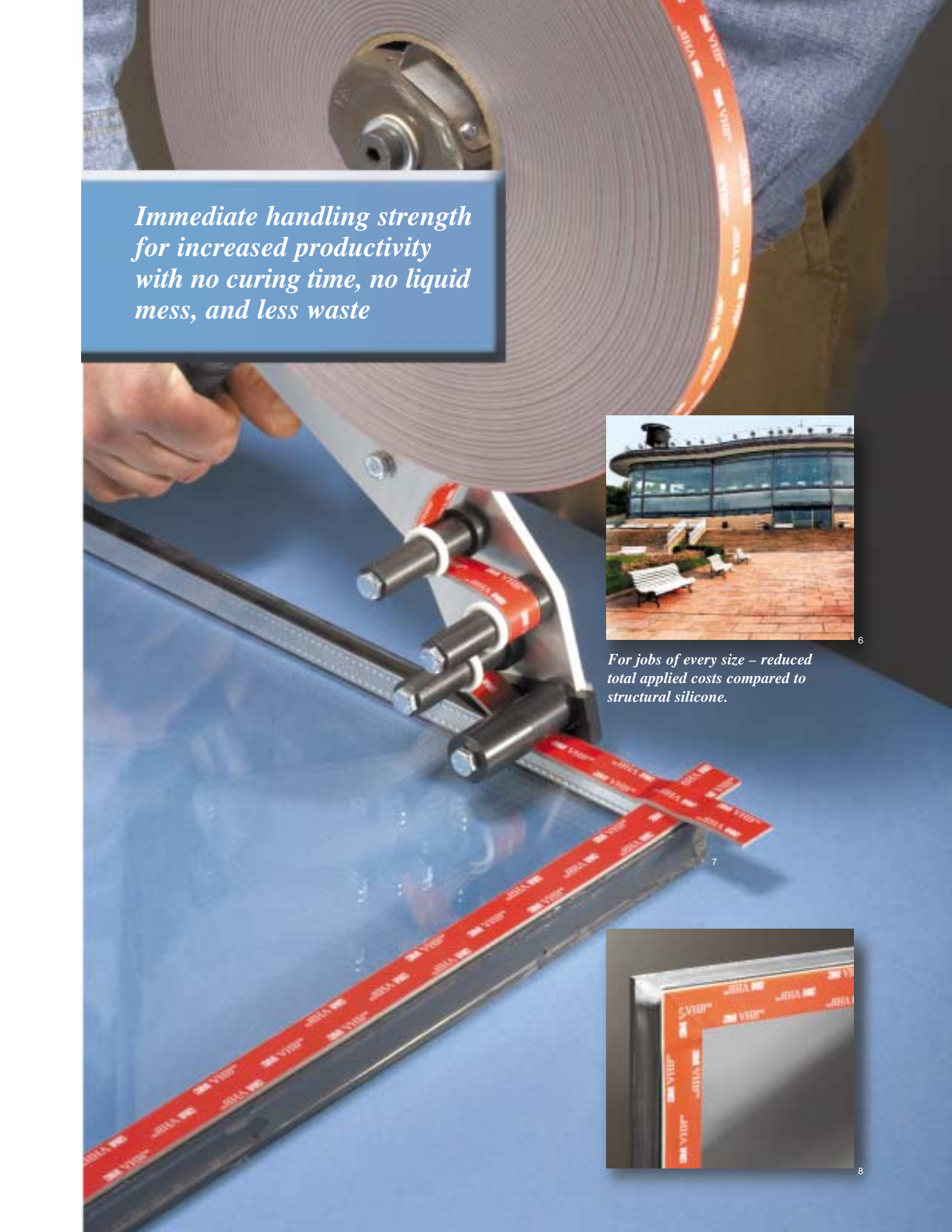
VHB™ Structural Glazing Tape

*Build fast
to last...*



*a revolution
in structural
glazing*





*Immediate handling strength
for increased productivity
with no curing time, no liquid
mess, and less waste*



6
*For jobs of every size – reduced
total applied costs compared to
structural silicone.*



7

8

3M™ VHB™ Structural Glazing Tape... success in thousands of buildings since 1990

*Durable for
ongoing confidence*



Reliability guaranteed

- Up to 20-year warranty for qualifying applications
- Bonds with excellent dynamic strength to replace wet glazing
- Resists environmental conditions such as UV, moisture, heat, and cold
- Viscoelasticity absorbs shock and allows movement for reliability against wind, vibration, and thermal expansion/contraction

Simplified application saving time and materials

- Speeds assembly and delivery
- Bonds on contact with no drying, fixturing, and liquid mess
- Saves the time, labor, and materials of spacer tape, gasketing, masking, and clean-up
- Eliminates the time and testing of 2-part systems for glass/butterfly, snap time, and mix ratio

Eye appeal from a distance and even up close from the inside and out

- Clean edge lines
- Tape bonds, seals and conforms to a variety of surfaces
- Color remains consistent from one end to the other
- No color change as seen between structural silicone and spacer tape/gasket

Specially formulated to permanently bond glass to metal frames in interior and exterior curtain



12



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3M™ VHB™ Structural Glazing Tape Application and Design Guidelines

Application Guidelines

3M™ VHB™ Structural Glazing Tape is a two-sided pressure sensitive adhesive acrylic foam tape designed to bond glass to metal frames in glass curtain wall systems. Each application will be reviewed on a project specific basis. Application guidelines will be based upon adhesion test results generated by 3M Technical Service. These project specific application guidelines will be provided to the customer and must be followed during the glass bonding process.

Design Guidelines

Note: For tape area calculations, the following guidelines can be used. Please ensure that each project is reviewed and approved by your local 3M Technical Service representative.

Dynamic Loads (deadload support)

For dynamic tensile or shear loads (such as windloads), a design strength of 12 psi (85 kPa) is used for 3M™ VHB™ Structural Glazing Tape. This design strength provides a safety factor of at least 5 and was established based on material property testing as well as ASTM dynamic load testing for curtain wall applications.

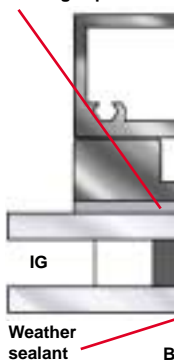
Static Loads (no deadload support)

For static tensile or shear loads (such as dead weight loads, snow loads, and other long-term loads), a design strength of 0.25 psi (1.7 kPa) is used for 3M™ VHB™ Structural Glazing Tape. This means 4 in² of 3M™ VHB™ Structural Glazing Tape per one pound of load should be used to support static loads. This guideline provides a safety factor of at least 5.

Important: Dynamic and static load calculations should be performed on unsupported deadload structural glazing applications. The calculations resulting in the wider tape width should be used as the appropriate tape width for the application.

Below are typical

3M™ VHB™ Structural Glazing Tape



n walls

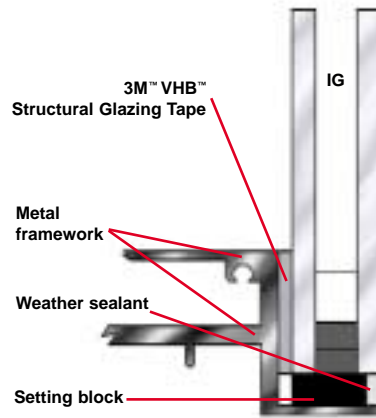
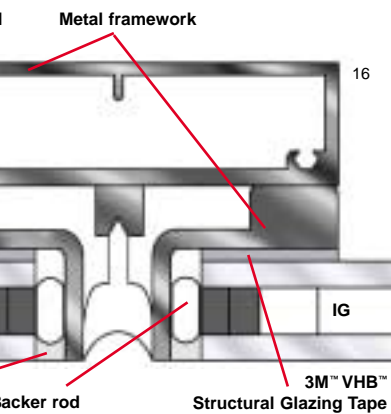


Product Information

3M™ VHB™ Structural Glazing Tapes G23F (Gray) and B23F (Black)

Adhesive	High performance acrylic
Adhesive carrier	Conformable closed cell acrylic foam
Thickness	2.3 mm (0.090")
Tolerance	± 10%
Density	720 kg/m ³ (45 lb.ft. ³)
Liner	0.125 mm (0.005") red polyethylene film
Peel strength	20 lb.in. width (350 N/100 mm) Stainless steel, ASTM D 3330
Tensile strength	70 lb./in. ² (480 kPa) Aluminum T-block, ASTM D 1002
Dynamic overlap shear strength	65 lb./in. ² (450 kPa) Stainless steel, ASTM D 1002
Static shear strength	1000 g/0.5 sq. in. for 10,000 min. at 72°F (22°C) 500 g/0.5 sq. in. for 10,000 min. at 150°F (66°C) and 200°F (93°C) Stainless steel, ASTM D 3654

ical assembly configurations shown for illustration purposes only.



3M™ VHB™ Structural Glazing Tape Warranty

For qualifying applications, 3M provides the curtain wall manufacturer and customer the confidence that the tape can deliver high performance and long-term reliability. Once your application and assembly process are approved, 3M guarantees that the tape will not fail for the warranty period. See your 3M representative for details on obtaining the warranty.

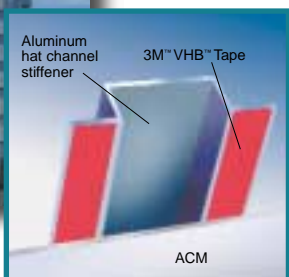
3M™ VHB™ Tape for Architectural Panels

For more than 20 years, engineers worldwide have been specifying 3M™ VHB™ Tapes to permanently bond and seal architectural panels. In commercial construction from Australia to Brazil, the United States to the United Arab Emirates, applications have continued to expand indoors and outdoors for panel to frame bonding and stiffener attachment.

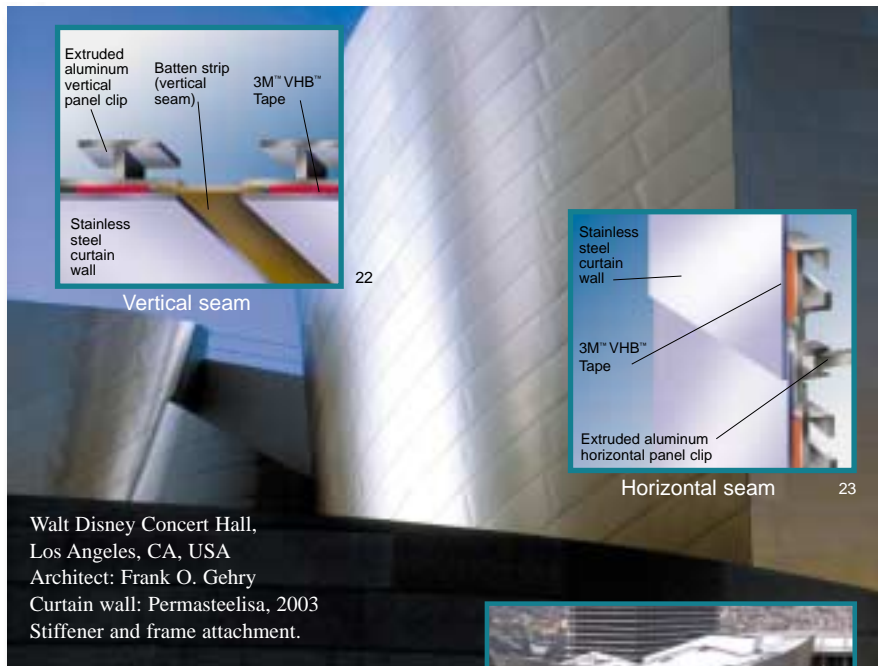


Plaza Centenário,
Sao Paulo, Brazil
Architect: Carlos Bratke, 1995
Aluminum stiffeners bonded
to ACM panels.

20



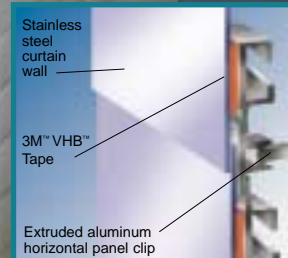
21



Walt Disney Concert Hall,
Los Angeles, CA, USA
Architect: Frank O. Gehry
Curtain wall: Permasteelisa, 2003
Stiffener and frame attachment.

Vertical seam

22



Horizontal seam

23



24

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For Additional Information: To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550. Address correspondence to 3M Industrial Adhesives and Tapes Division, 3M Center, Building 21-1W-10, 900 Bush Avenue, St. Paul, MN 55144. Our fax number is 651-778-4244.

Limited Product Warranty: 3M warrants for 24 months from the date of manufacture, that 3M™ VHB™ Tape will be free of defects in material and manufacture. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. This warranty does not cover damage resulting from the use or inability to use 3M VHB Tape due to misuse, workmanship in application, or application or storage not in accordance with 3M recommended procedures. **Important Notice:** User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of these materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which 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 of application.

Limitation of Remedies and Liability: If the 3M™ VHB™ Tape is proved to be defective within the warranty period stated above, THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M™ VHB™ TAPE. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including negligence, warranty, or strict liability.



**Industrial and Transportation Business
Industrial Adhesives and Tapes Division**

3M Center Bldg. 21-1W-10
900 Bush Ave.
St. Paul, MN 55144
www.3M.com/vhb

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