



# 3M™ VHB™ Commercial Vehicle Tape

## CV45F / CV62F / CV90F

Technical Data

March, 2020

### Product Description

3M™ VHB™ Commercial Vehicle Tapes are conformable, double-coated, pressure sensitive acrylic foam tapes. The acrylic foam chemistry has outstanding durability, UV resistance and temperature performance. Since 1980, 3M™ VHB™ Tapes have been used for sidewall panel attachment on commercial vehicles such as trailers, truck bodies, ambulances, fire trucks, busses, and rail cars. The high strength, viscoelastic acrylic foam of the the 3M™ VHB™ Commercial Vehicle Tapes provide unique energy absorbing and stress relaxing properties not found in general purpose foam tapes such as polyethylene foam tape.

3M™ VHB™ Commercial Vehicle Tapes provide excellent adhesion to a broad range of materials and surfaces commonly used in the commercial vehicle industry. Common substrates include bare aluminum, bare steel, galvanized steel, painted steel, painted aluminum panels, and fiberglass reinforced plastic panels. 3M™ VHB™ Commercial Vehicle Tapes CV62F and CV90F are typically used for panel to post bonding and roof attachment. The thinner 3M™ VHB™ Commercial Vehicle Tape CV45F is typically used for panel to panel attachment at the overlap seam.

**Note:** 3M™ VHB™ Commercial Vehicle Tapes should be thoroughly evaluated by the user under actual use conditions with intended substrates to determine suitability of these tapes for your particular application.

Product Construction	Product	Adhesive	Adhesive Carrier	Thickness	Density	Tape Color	Liner
	3M™ VHB™ Commercial Vehicle Tape CV45F	Multi-Purpose Acrylic	Conformable Acrylic Closed Cell Foam	0.045 in (1.14 mm)	45 lb/ft <sup>3</sup> (720 kg/m <sup>3</sup> )	Gray	Red polyethylene
	3M™ VHB™ Commercial Vehicle Tape CV62F	Multi-Purpose Acrylic	Conformable Acrylic Closed Cell Foam	0.062 in (1.57 mm)	45 lb/ft <sup>3</sup> (720 kg/m <sup>3</sup> )	Gray	Red polyethylene with white printing
	3M™ VHB™ Commercial Vehicle Tape CV90F	Multi-Purpose Acrylic	Conformable Acrylic Closed Cell Foam	0.090 in (2.3 mm)	45 lb/ft <sup>3</sup> (720 kg/m <sup>3</sup> )	Gray	Red polyethylene with white printing

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### Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

	3M™ VHB™ Commercial Vehicle Tape CV45F	3M™ VHB™ Commercial Vehicle Tape CV62F	3M™ VHB™ Commercial Vehicle Tape CV90F
<b>Peel Adhesion:</b>			
<ul style="list-style-type: none"> <li>Based on ASTM D-3330</li> <li>To aluminum</li> <li>Room temperature</li> <li>90° peel</li> <li>Jaw Speed 12 in/min (305 mm/min)</li> </ul>		25 lb/in width 440 N/100 mm)	
<b>Normal Tensile:</b>			
<ul style="list-style-type: none"> <li>ASTM D-897</li> <li>To aluminum T-Block</li> <li>Room temperature</li> <li>1 in<sup>2</sup> (6.45 cm<sup>2</sup>)</li> <li>Jaw Speed 2 in/min (50 mm/min)</li> </ul>	85 lb/in <sup>2</sup> (590 kPa)	80 lb/in <sup>2</sup> (550 kPa)	70 lb/in <sup>2</sup> (480 kPa)
<b>Dynamic Shear:</b>			
<ul style="list-style-type: none"> <li>ASTM D-1002</li> <li>To stainless steel</li> <li>Room temperature</li> <li>1 in<sup>2</sup> (6.45 cm<sup>2</sup>)</li> <li>Jaw Speed 0.5 in/min (12.7 mm/min)</li> </ul>	70 lb/in <sup>2</sup> (480 kPa)	70 lb/in <sup>2</sup> (480 kPa)	65 lb/in <sup>2</sup> (450 kPa)
<b>Static Shear:</b>			
<ul style="list-style-type: none"> <li>ASTM D-3654</li> <li>To stainless steel</li> </ul>	72°F (22°C)	1000 g / 0.5 in <sup>2</sup> (holds 10,000 min)	
	150°F (66°C)	500 g / 0.5 in <sup>2</sup> (holds 10,000 min)	
	200°F (93°C)	500 g / 0.5 in <sup>2</sup> (holds 10,000 min)	
<b>Temperature Resistance:</b>			
Short Term: (minutes, hours)		300°F (149°C)	
Long Term: (days, weeks)		200°F (93°C)	
<b>Moisture Resistance:</b>		Excellent	
<b>Solvent Resistance:</b>		Excellent	
<b>U.V. Resistance:</b>		Excellent	

### Available Sizes

<b>Standard Widths:</b>	1/2 in (12.7 mm), 3/4 in (19.1 mm), 1 in (25.4 mm)
<b>Standard Length:</b>	36 yd (32.9 m)
<b>Core Diameter (ID):</b>	3.0 in (76.2 mm)
<b>Slitting Tolerance:</b>	± 1/32 in (0.8 mm)

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### Application Guidelines

Depending on the substrates to be bonded, one of the following surface preparation methods may be required to achieve a strong bond:

- 1) Clean Only: Clean with a 50:50 mixture of isopropyl alcohol\* and water (IPA/water, 50-70% IPA) to remove contaminants; or
- 2) Abrade + Clean: Fine abrading of surface followed by cleaning with IPA/water; or
- 3) Clean + Adhesion Promoter or Primer: Clean with IPA/water followed by application of 3M™ Adhesion Promoter 111 or 3M Primer 94; or
- 4) Abrade + Clean + Adhesion Promoter or Primer: Abrade surface followed by cleaning with IPA/water followed by application of 3M™ Adhesion Promoter 111 or 3M™ Primer 94

Ideal application temperature range is 60°F to 100°F (15°C to 38°C). Pressure sensitive adhesives use viscous flow to achieve substrate contact area. Tape application to surfaces at temperatures below 60°F (15°C) is generally not recommended, unless the bonding surface has been prepared with 3M™ Adhesion Promoter 111 or 3M™ Primer 94 (e.g., surface preparations 3 or 4). Once properly applied, low temperature holding is generally satisfactory.

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure develops better adhesive contact and helps improve bond strength. The tape should experience at least 15 psi (100 kPa) of pressure. 15 pounds (67 N) of downward force with a heavy duty or dense laminate roller (Beno J. Gundlach V300-SB) is often sufficient. The application of pressure facilitates wet-out of the tapes' adhesive onto the prepared surface.

Further surface preparation and application bonding information, including guidelines for bonding at temperatures below 60°F (15°C), is available in the following 3M Technical Bulletins or visit: [www.3M.com/vhb](http://www.3M.com/vhb):

- *Panel Bonding Procedure using 3M™ VHB™ Tape*
- *Surface Preparation for 3M™ VHB™ Tape Applications*

\* Consult manufacturer's directions for use and precautions when using cleaning solvents. Consult applicable State and local air quality rules and regulations to confirm that materials used in the cleaning and surface preparation steps are compliant with air quality rules and regulations before use.

### Shelf Life

3M™ VHB™ Commercial Vehicle Tapes have a shelf life of 24 months from date of shipment when stored at 40°F to 100°F (4°C to 38°C) and 0-95% relative humidity. The optimum storage conditions are 72°F (22°C) and 50% relative humidity.

The manufacturing date is printed on a label attached to the 3M™ VHB™ Tape liner as part of the lot or run number. An example of printing is "CV45F 20087". The three digits after the number "20" indicates the Julian date (YYDDD). In this example, the tape was manufactured in 2020 on the 87th day of the year or March 27, 2020.

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### Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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### Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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### Limited Warranty

3M warrants for 24 months from the date of shipment 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 limited 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. AN APPLICATION WARRANTY EXPRESSLY APPROVED AND ISSUED BY 3M IS AN EXCEPTION. THE CUSTOMER MUST APPLY FOR A SPECIFIC APPLICATION WARRANTY AND MEET ALL WARRANTY AND PROCESS REQUIREMENTS TO OBTAIN AN APPLICATION WARRANTY. CONTACT 3M FOR MORE INFORMATION ON APPLICATION WARRANTY TERMS AND CONDITIONS.

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### 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.

ISO 9001

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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