



VHB™ Clear 100F

Product Data Sheet

September 2014
Supersedes: October 2012

Product Description

VHB™ Clear 100F is a clear acrylic tape. Its colourless construction makes it ideal for bonding transparent materials or for applications where a coloured bond line is unacceptable. These tapes have somewhat lower peel, tensile and shear performance than most other VHB™ tapes due to their inherent softness.

Physical Properties

Adhesive Type	Acrylic
Thickness (ASTM D-3652) Tape Liner Total	1.00 mm 0.10 mm 1.10 mm
Density	960 kg/m ³
Release Liner	Filmic (White)
Tape Colour	Clear This tape product is clear in colour but NOT guaranteed to be optically clear.

Performance Characteristics

Peel Adhesion acc. to ASTM D 3330 Stainless steel, 90° peel, 23°C, 72h dwell, jaw speed 300mm/min	32 N/cm
Normal Tensile (T-Block) acc. to ASTM D-897 Al T-Block/Al, 6,45 cm ² , pull speed 50 mm/min, 23°C, Dwell 72h	140 N/cm ²
Static Shear Strength acc. to ASTM D-3654 Stainless steel, 3,23 cm ² , Dwell 72h, > 10.000 min	1000g at 23°C 500g at 70°C 500g at 90°C
Temperature Performance Max (hours/minutes) Max Continuous (days/weeks)	150 °C 90 °C

Surfaces

This product bonds to high energy surfaces such as glass, acrylic sheet and metals. Painted surfaces and varnishes should be evaluated. Bonding to polypropylene and rubbers is not recommended.

Application Techniques	<p>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.</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 & water. The use of proper safety precautions for handling solvents is strongly recommended.</p> <p>3. Ideal tape application temperature range is from 20°C to 40°C. Initial tape application to surfaces at temperatures below 10°C is not recommended because the adhesive becomes too firm to adhere readily. However once properly applied low temperature holding is generally satisfactory.</p>
Applications	<p>VHB™ Joining Systems are suited for use in many interior and exterior industrial applications. In many situations, they can replace rivets, spot welds, liquid adhesives, and other permanent fasteners. Each product in the VHB™ family has specific strengths. These can include high tensile, shear and peel adhesion and resistance to solvents, moisture and plasticiser migration. All VHB™ tapes should be thoroughly evaluated by the user under actual use conditions with intended substrates, especially if expected use involves extreme environmental conditions.</p> <p>VHB™ Joining Systems are suitable for bonding a variety of substrates, including sealed wood, many plastics, composites and metals. Plastics which can be a problem are polyethylene, polypropylene, PTFE (polytetrafluoroethylene), silicones and other low surface energy materials.</p> <p>Plasticized vinyl bonding is dependent upon the types and concentrations of plasticizers which can migrate into the adhesives causing a reduction in bond strength; 3M™ VHB™ tape 4945 is most resistant to plasticiser migration.</p> <p>Galvanized surfaces are potential problems and should be carefully evaluated.</p> <p>To prevent corrosion of copper and brass, only lacquer coated material should be bonded with VHB™ Joining Systems.</p> <p>Thorough evaluations are recommended when bonding is required to any questionable surface.</p>
Shelf Life	<p>VHB™ Clear 100F has a shelf life of 24 months from date of dispatch by 3M when stored in the original carton at 21°C (70°F) & 50 % Relative Humidity</p>
Precautionary Information	<p>Refer to product label and Material Safety Data Sheet for health and safety information before using the product. For information please contact your local 3M Office. www.3M.com</p>
For Additional Information	<p>To request additional product information or to arrange for sales assistance, call..... Address correspondence to: 3M</p>

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

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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