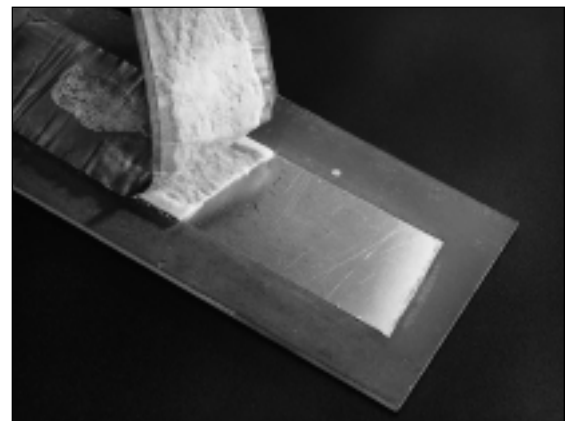
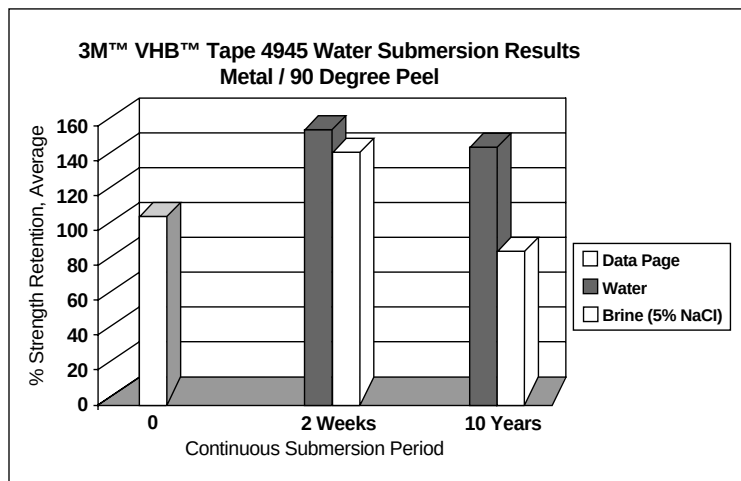




VHB™ Tape Underwater Durability: 10 Year Submersion

Technical Bulletin

Adhesion tests have been performed on 3M™ VHB™ Tape bonded to metal which was subjected to 2 weeks and 10 years of submersion in 5% salt water and ordinary tap water. Submersed samples were stored in a jar that was maintained at room temperature. After testing in a peel mode, bright clean aluminum/metal surfaces were observed underneath the adhesive bond line. 3M™ VHB™ Tape can act as a barrier that helps protect and prevent galvanic corrosion between dissimilar metallic materials. A combination of adhesive and cohesive failure modes were observed when the bond was broken which indicated very high performance level.



Sample of metal submersed for 10 years. Note bright clean aluminum under the adhesive bond line.

Long term submersion or exposure to moisture or water submersion can have the effect of making the polymer more resilient and tolerant of high elongation. A subsequent lowering in peak force, usually in the order of 40%, is typically measured after many days of exposure. Drying of the 3M™ VHB™ Tape and bond lines will show this effect is reversible, and that the bond will return to the original dry strength.

While we feel that this evaluation is representative of the performance of all 3M™ VHB™ Tapes under continuous submersion underwater, performance to conditions and environments must be thoroughly evaluated by the customer to ensure that any 3M™ VHB™ Tape will meet particular application requirements.

Technical Bulletin

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Product Use

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 of application.

Limited 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 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.

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 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.



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