

3M

VHB™ Tape

Disassembly of VHB Tape bonded materials and removal of residue adhesive

Technical Bulletin

October, 2001

Disassembly of large-scale materials bonded with 3M™ VHB™ Tape:

Cutting through the tape bondline is the most effective method of separating large assemblies (> 20 square inches) bonded with tape (i.e.: signs, architectural panels, truck and trailer walls or door skins, office furniture and other fabricated assemblies). This task can be done with a sharp cutting tool (if access is possible) or a fine tooth saw.

- A very effective tool for this purpose is the **3M™ SMART Tool** (Side Molding and Emblem Removal Tool) (part number 08978). When used in a standard air chisel, this tool will quickly cut through the center of the foam tape, separating the two halves. With care, large assemblies can be disassembled and often times reused. The disassembly will leave adhesive residue on both sides of the debonded materials. For removal of this residue please read the section below.

Note: Follow all safety instructions for the use of the **SMART Tool** (printed on packaging) and manufacturer's instructions for operation of the air tool.

- If the assembled components can withstand increased temperatures, a hand held heat gun may be used to locally heat the tape and facilitate removal.

Removal of adhesive residue:

To remove residual adhesive from the disassembled parts, several methods are useful:

- **3M™ Stripe Off Wheel**

The **Stripe Off Wheel** (part number 07498) is a special rubber disk which mounts to a standard 3/8" electric drill. When the rotating disk is brought in contact with the adhesive residue, it lifts the adhesive from the surface. When used properly the wheel does not damage painted surfaces. It helps to remove the bulk of the adhesive foam residue with a razor scrapper or knife before using the wheel. This operation can be followed up with a cleaner wipe to remove debris.

Note: Follow all safety instructions for the use of the **Stripe Off Wheel** (include in packaging) and for operation of any power tools.

- **Abrading**

If surface damage is not an issue, residual adhesive can be removed with a porous abrasive disk or wheel. A detackifying agent such as a detergent/water solution or dry talc may be used to facilitate removal and help prevent clogging of the abrasive. Low speeds are generally more effective than high speeds for removal to prevent excessive heat buildup. Once the adhesive is lifted off the surface, a cleaner wipe can be used to remove the debris.

- **Solvents**

The adhesive residue can be wet with a solvent then covered with a plastic film and allowed to soak for 5-15 minutes. Once the adhesive is softened, use a scrapper to remove the adhesive. Solvents to use include:

- 3M™ Citrus Base Cleaner
- Automotive Bug-and Tar remover
- MEK (Methyl-Ethyl-Ketone)
- Other commercial adhesive removers

Note: Follow all manufacturer's safety precautions when using solvents. These cleaning recommendations may not be compliant with the requirements of certain Air Quality Management Districts in California; consult applicable rules before use.

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Disassembly of small bonded parts (< 20 square inches):

- **Cutting**

Cutting the bondline is also effective on small assemblies. The methods outlined above may be used or other cutting devices such as a fine tooth saw blade or a textured wire, using liquid soap as a lubricant, might be used.

- **High Frequency Shock**

Small parts can be cooled below -40°F (-40°C) where the 3M™ VHB™ Tape will become rigid. A sharp impact, focused near the bondline, should fracture the adhesive. Once the part is warmed up to room temperature, the residual adhesive can be removed using the procedures outlined above.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550 or visit www.3M.com/adhesives. Address correspondence to: 3M Engineered Adhesives Division, 3M Center, Building 220-7E-01, St. Paul, MN 55144-1000. Our fax number is 651-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

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 those 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.

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.

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.



This Engineered Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



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©3M 2001 70-0707-6160-9 (10/01)