

3M 5-4930-1/2

# 3M VHB 4930 Acrylic Adhesive Tape Instruction Manual

Model: 5-4930-1/2

## PRODUCT OVERVIEW

The 3M VHB 4930 Acrylic Adhesive Tape is a high-performance, double-sided pressure-sensitive tape designed to create strong, permanent bonds. It serves as an effective alternative to traditional mechanical fasteners like rivets, screws, and liquid adhesives, providing a clean and smooth surface finish. This tape is engineered to maintain its bond integrity across a wide range of environmental conditions, including extreme hot, cold, and humid temperatures, and offers resistance to UV light, solvents, and chemicals.

Its viscoelastic properties allow it to absorb energy and distribute stress over the entire bond line, ensuring durability and long-term performance in various indoor and outdoor applications.

## PACKAGE CONTENTS

- 5 x 3M VHB 4930 Acrylic Adhesive Tape Circles (0.5 inch diameter)



Image: A sheet containing multiple 0.5-inch diameter 3M VHB 4930 Acrylic Adhesive Tape circles, ready for use.

## PREPARATION AND APPLICATION

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Proper surface preparation is critical for achieving optimal bond strength and long-term durability with 3M VHB Tape. Follow these steps carefully:

1. **Surface Cleaning:** Ensure all surfaces to be bonded are clean, dry, and free from oil, grease, dust, and other contaminants. Use a 50/50 mixture of isopropyl alcohol (IPA) and water for cleaning. Wipe the surface thoroughly and allow it to dry completely.
2. **Temperature:** For best results, apply the tape when the ambient temperature and the surface temperature are between 65°F (18°C) and 100°F (38°C). Application below 50°F (10°C) is not recommended as the adhesive may become too firm to adhere properly.
3. **Primer (Optional):** For certain low surface energy plastics or porous materials, a 3M VHB Tape Primer may be required to enhance adhesion. Consult 3M technical data sheets for specific material recommendations.
4. **Tape Application:**
  - Peel off one side of the protective liner from the VHB tape circle.

- Carefully position the tape onto the first surface, ensuring proper alignment.
- Apply firm, uniform pressure across the entire tape surface to ensure good contact.
- Remove the remaining protective liner.
- Align the second substrate and press it firmly onto the tape. Apply significant pressure (e.g., with a roller or by hand) for several seconds to ensure maximum contact and bond development.

5. **Bond Development:** The bond strength will increase over time as the adhesive flows onto the surface. Approximately 50% of the ultimate bond strength is achieved after 20 minutes, 90% after 24 hours, and 100% after 72 hours. Avoid stressing the bond during the initial 24-hour period.



Image: A person wearing gloves and safety glasses applies a strip of 3M VHB tape to a metal frame, demonstrating the application process for structural bonding.



Image: A close-up view illustrating the strong, clear bond created by 3M VHB tape between different materials such as metal, glass, and plastic, highlighting its versatility.

## MAINTENANCE AND STORAGE

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- **Storage:** Store 3M VHB Tape in its original packaging in a cool, dry place (ideally 60-80°F / 15-27°C and 40-60% relative humidity) away from direct sunlight and heat sources.
- **Shelf Life:** When stored properly, the tape typically has a shelf life of 24 months from the date of manufacture.
- **Bond Integrity:** Once applied correctly, 3M VHB Tape bonds are designed for long-term durability and typically require no maintenance. However, regularly inspect bonded areas in critical applications for any signs of stress or degradation.
- **Cleaning Bonded Surfaces:** Clean bonded surfaces as you would the original materials, avoiding harsh solvents that could potentially degrade the bond over time.

## TROUBLESHOOTING

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Problem	Possible Cause	Solution
Poor initial adhesion	<ul style="list-style-type: none"><li>◦ Contaminated surfaces</li><li>◦ Insufficient application pressure</li><li>◦ Low application temperature</li><li>◦ Incompatible substrate</li></ul>	<ul style="list-style-type: none"><li>◦ Thoroughly clean surfaces with IPA/water mixture.</li><li>◦ Apply firm, uniform pressure during application.</li><li>◦ Ensure application temperature is within recommended range (65-100°F / 18-38°C).</li><li>◦ Consider using a primer or a different 3M VHB tape for challenging substrates.</li></ul>
Bond failure over time	<ul style="list-style-type: none"><li>◦ Improper surface preparation</li><li>◦ Excessive stress on bond line</li><li>◦ Exposure to extreme conditions beyond tape's rating</li></ul>	<ul style="list-style-type: none"><li>◦ Re-evaluate surface cleaning and application process.</li><li>◦ Ensure the tape is appropriately sized and positioned to distribute load.</li><li>◦ Verify tape specifications meet environmental demands.</li></ul>

## SPECIFICATIONS

Attribute	Detail
Model Number	5-4930-1/2
Brand	3M
Tape Type	VHB (Very High Bond) Acrylic Adhesive Tape
Color	White
Material	Foam, Acrylic Foam, Acrylic Adhesive
Thickness	0.025 inches
Shape/Size	0.5 inch diameter circles
Number of Items	5 per pack
Special Feature	Strong, Permanent, Weather Resistant, UV Resistant, Solvent Resistant

## IMPORTANT NOTICES AND SAFETY INFORMATION

3M industrial and occupational products, including this VHB tape, are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. These products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature).

Users must select and use these products in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and other limitations. The user must take any action required under any recall, field action, or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, death, or property damage.

For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit [www.3M.com](http://www.3M.com).

# WARRANTY AND SUPPORT

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For specific warranty information regarding 3M VHB products, please refer to the official 3M product documentation or contact 3M directly. 3M stands behind its products and provides technical support to assist with product selection, application, and performance inquiries.

For technical assistance or further information, please visit the official 3M website or contact 3M customer service through their provided channels.

