

3M[™] VHB[™] GPH Series

Product Data Sheet

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Product Description 3M[™] VHB[™] GPH Series, a general purpose, high temperature, grey conformable double coated acrylic foam tape with a high initial tack and a soft foam. Available in three different thicknesses with a 3M branded red siliconised polyethylene film liner.

- Key Features**
- Double coated acrylic foam tape
 - 100 % closed cell acrylic foam
 - High temperature performance (short term 230 °C)
 - Good balance of high temperature and peel & shear performance
 - High initial tack
 - Soft foam enables stress relaxation & an easy application
 - Good sealing properties
 - For indoor and outdoor applications

- Applications & Benefits**
- Its temperature performance enables bonding of materials in applications with high operating temperatures such as prior to processing in a powder coating line
 - Capability to bond to a variety of substrates makes it a good fit for multi material bonding - those substrates have a high or medium surface energy including many metals (e.g. stainless steel) and plastics (e.g. Polyamide, PMMA, ABS)
 - For applications in metal working, signage, appliances and specialty vehicle

Physical Properties

| | GPH-060GF | GPH-110GF | GPH-160GF |
|--|--|-----------|-----------|
| Adhesive Type | Acrylic foam adhesive | | |
| Thickness acc. to ASTM D-3652 | 0.60 mm | 1.10 mm | 1.60 mm |
| Foam Density | 710 kg/m ³ | | |
| Release Liner | 3M branded red siliconised polyethylene film | | |
| Tape Colour | Grey | | |

Performance Characteristics

| Type | GPH-060GF | GPH-110GF | GPH-160GF |
|---|--|-------------------------------|-------------------------------|
| 90 ° Peel adhesion to Stainless Steel acc. to ASTM D3330, 90° peel angle @ RT, after 72h @ RT dwell | 25 N/cm | 37 N/cm | 34 N/cm |
| 90 ° Peel adhesion to PA6 acc. to ASTM D3330, 90° peel angle @ RT, after 72h @ RT dwell | 33 N/cm | 48 N/cm | 55 N/cm |
| 90 ° Peel adhesion to ABS acc. to ASTM D3330, 90° peel angle @ RT, after 72h @ RT dwell | 21 N/cm | 33 N/cm | 32 N/cm |
| 90 ° Peel adhesion to PMMA acc. to ASTM D3330, 90° peel angle @ RT, after 72h @ RT dwell | 21 N/cm | 34 N/cm | 37 N/cm |
| Dynamic Shear acc. to ASTM D1002 on stainless steel, after 72h @ RT dwell | 547 N/6.54 cm ² | 476 N/6.54 cm ² | 375 N/6.54 cm ² |
| Static Shear Strength acc. to ASTM D3654, after 72h @ RT dwell (Weight held for 10.000 minutes to stainless steel, 3.32cm ² (0.5in ²)) | 23 °C - 1000 g 150 °C - 500 g | | |
| Normal Tensile (T-Block) acc. to ASTM D897 to Aluminium @ RT, after 72h @ RT dwell, 6.45 cm ² , test speed 50 mm/min | 410 N/6.54 cm ² | 439 N/6.54 cm ² | 470 N/6.54 cm ² |
| Temperature Performance | Short term (minutes, hours): 230 °C Long term (days, weeks): 150 °C | | |

Application Temperature

Ideal application temperature range is 21 °C to 38 °C. Pressure sensitive adhesives use viscous flow to achieve substrate contact area.

Low Temperature Application:

3M™ VHB™ GPH Tape be applied at 10 °C and down to 5 °C when using 3M Adhesion Promoter AP111 or Primer 94

To obtain good performance with all 3M™ VHB™ Tapes, it is important to ensure that the surfaces are clean, dry and free of condensed moisture.

Shelf Life

24 months from date of production when stored at 16 °C – 25 °C and 40-65 % relative humidity.

Performance of tapes is not projected to change even after shelf life expires; however, 3M does suggest that 3M™ VHB™ Tapes are used prior to the shelf life date whenever possible.

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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