

3M[™] VHB[™] GPH Series

Product Data Sheet

September 2018
Supersedes: February 2017

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.

3M and VHB are trademarks of the 3M Company

3M United Kingdom PLC
2M Centre, Cain Road, Bracknell
RG12 8HT
United Kingdom

3M Svenska AB
Herrjärva torg 4
170 67 Solna
Sweden

3M Eesti OÜ
Pärnu mnt. 158
11317 Tallinn
Estonia

3M Ireland Ltd
The Iveagh Building, 3rd Floor
The Park, Carrickmines 18
Ireland

3M a/s
Hannemanns Allé 53
DK-2300 Copenhagen S.
Denmark

3M Latvia SIA
K.Ulmaņa gatve 5
Rīga, LV-1004
Latvia

3M Belgium bvba/sprl
Hermeslaan 7
1831 Diegem
Belgium

3M Norge AS
Tærudgata 16
2004 Lillestrøm
Norway

3M Lietuva UAB
A.Goštauto g. 40
Vilnius LT- 03163
Lithuania

3M Nederland B.V.
Molengraaffsingel 29
2629 JD Delft
The Netherlands

Suomen 3M Oy
Keilaranta 6
02150 Espoo
Finland