

3M[™] VHB[™] GPH Series

Product Data Sheet

September 2022
Supersedes: September 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.

Automotive Disclaimer

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M's Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer's use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.

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