VHB™ GPH Series

Product Data Sheet

September 2022
Supersedes: September 2018

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/m³		
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 cm²	476 N/6.54 cm²	375 N/6.54 cm²
Static Shear Strength acc. to ASTM D3654, after 72h @ RT dwell (Weight held for 10.000 minutes to stainless steel, 3.32cm² (0.5in²)	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 cm², test speed 50 mm/min	410 N/6.54 cm²	439 N/6.54 cm²	470 N/6.54 cm²
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

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