VHB™ GPH Series

Product Data Sheet

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Supersedes: NEW

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.

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-110GF
90°Peel adhesion to Stainless Steel acc. to ASTM D3330, 90°peel angle @ RT, after 72h @ RT dwell	39 N/cm
90°Peel adhesion to Polyamide 6 acc. to ASTM D3330, 90°peel angle @ RT, after 72h @ RT dwell	48 N/cm
90°Peel adhesion to ABS acc. to ASTM D3330, 90°peel angle @ RT, after 72h @ RT dwell	33 N/cm
90°Peel adhesion to PMMA acc. to ASTM D3330, 90°peel angle @ RT, after 72h @ RT dwell	34 N/cm

Type	GPH-060GF	GPH-110GF	GPH-160GF
Dynamic Shear acc. to ASTM D1002 on stainless steel, after 72h @ RT dwell	559 N/ 6.54 cm²	476 N/ 6.54 cm²	387 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	399 N/ 6.54 cm²	438 N/ 6.54 cm²	454 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 ℃ to 38 ℃. Pressure sensitive adhesives use viscous flow to achieve substrate contact area.
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.

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