



3M™ VHB™ Tape LSE Series

Product Data Sheet

October 2019
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Product Description

3M™ VHB™ Tape LSE Series is a white, conformable, double-coated acrylic foam tape with a high initial tack and a soft foam. Its design enables bonding of many low surface energy substrates/materials. 3M VHB Tape LSE is a white tape 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
- Multi material bonding for high, medium or low surface energy substrates including many metals (e.g. stainless steel), composites and plastics (e.g. PP, PA)
- Enables bonding of many LSE substrates without primer
- Good low temperature tack
- Soft foam enables stress relaxation & an easy application
- High initial tack
- For indoor and outdoor applications

Applications & Benefits

- Capability to bond to many LSE substrates without primer makes it a good fit for applications in many industries such as plastics processing, transportation, appliances and signage

Physical Properties

| | LSE-060WF | LSE-110WF | LSE-160WF |
|--|--|-----------|-----------|
| Adhesive & Carrier | Modified Acrylic on Conformable Acrylic Foam (closed-cell) | | |
| Thickness acc. to ASTM D-3652 | 0.60 mm | 1.10 mm | 1.60 mm |
| Density | 715 kg/m ³ | | |
| Release Liner | 3M branded red siliconised polyethylene film | | |
| Tape Colour | White | | |

Performance Characteristics

| Type | LSE-060WF | LSE-110WF | LSE-160WF |
|--|---|----------------------------|----------------------------|
| 90 ° Peel adhesion to Stainless Steel acc. to ASTM D3330, 90° peel angle @ RT, after 72h @ RT dwell | 30 N/cm | 44 N/cm | 54 N/cm |
| 90 ° Peel adhesion to Polypropylene acc. to ASTM D3330, 90° peel angle @ RT, after 72h @ RT dwell | 24 N/cm | 42 N/cm | 51 N/cm |
| 90 ° Peel adhesion to Glass acc. to ASTM D3330, 90° peel angle @ RT, after 72h @ RT dwell | 29 N/cm | 43 N/cm | 51 N/cm |
| 90 ° Peel adhesion to ABS acc. to ASTM D3330, 90° peel angle @ RT, after 72h @ RT dwell | 24 N/cm | 40 N/cm | 47 N/cm |
| Static Shear Strength on Stainless Steel acc. to ASTM D3654, after 72h @ RT dwell (Weight held for 10.000 minutes, 3.22cm ² (0.5in ²), vertical test direction | 23 ° C - 1000 g 70 ° C - 550 g 90 ° C - 250 g | | |
| Static Shear Strength on Polypropylene acc. to ASTM D3654, after 72h @ RT dwell (Weight held for 10.000 minutes, 3.22cm ² (0.5in ²), vertical test direction Limited by substrate | 23 ° C - 1000 g 70 ° C - 500 g 90 ° C - 500 g | | |
| Dynamic Shear acc. to ASTM D1002 on stainless steel, after 72h @ RT dwell | 525 N /6.54cm ² | 382 N /6.54cm ² | 347 N /6.54cm ² |
| Normal Tensile (T-Block) acc. to ASTM D897 to Aluminium @ RT, after 72h @ RT dwell, test speed 50 mm/min | 365 N /6.54cm ² | 309 N /6.54cm ² | 290 N /6.54cm ² |
| Temperature Performance | Short term (minutes, hours): 150 °C Long term (days, weeks): 90 °C | | |

Application Temperature

Ideal application temperature range 10 °C to 38 °C. For certain applications and substrates 3M™ VHB™ Tape LSE can be applied at temperatures as low as 0 °C if the surface is frost free. Testing on application-specific substrates is recommended to confirm adhesion at temperatures <10°C.

Pressure sensitive adhesives use viscous flow to achieve substrate contact area. To obtain good performance, it is important to ensure that the surfaces are clean, dry and free of condensed moisture.

Shelf Life

18 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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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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