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/m³**		
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, 3.22cm² (0.5in²), 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, 3.22cm² (0.5in²), 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 /6.54cm²	382 N /6.54cm²	347 N /6.54cm²
Normal Tensile (T-Block) acc. to ASTM D897 to Aluminium @ RT, after 72h @ RT dwell, test speed 50 mm/min	365 N /6.54cm²	309 N /6.54cm²	290 N /6.54cm²
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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