

# 3M

# VHB™ Acrylic Foam Tapes

## 4930·4945·4950·4959

Product Information	June 2007
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<b>Description</b>	3M VHB™ Acrylic Foam Tapes 4930, 4945, 4950 and 4959 are double coated pressure sensitive adhesive tapes for bonding a wide range of high and medium surface energy substrates including metals, glass and some plastics. The firm foam provides superior strength in applications experiencing high dynamic stress.
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<b>Features</b>	<ul style="list-style-type: none"> <li>• Excellent adhesion to high surface energy surfaces</li> <li>• Flexible to conform to irregular surfaces</li> <li>• Cushions and damps vibration</li> <li>• High dynamic shear resistance</li> <li>• For interior and exterior use</li> </ul>
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Physical Properties/Typical Performance Characteristics*						
Tape carrier		Firm acrylic foam (closed cell)				
Adhesive		<b>4930, 4950, 4959</b>		Firm Acrylic		
		<b>4945</b>		Medium Acrylic		
Tape colour		White				
Tape Thickness		<b>4930</b>		0.64mm		
		<b>4950, 4945</b>		1.1mm		
		<b>4959</b>		3.0mm		
Liner		<b>4930,4945, 4950</b>		White printed paper		
		<b>4959</b>		Red polyethylene film		
Foam density		<b>4930, 4945 4950</b>		800kg/m <sup>3</sup>		
		<b>4959</b>		720kg/m <sup>3</sup>		
90 <sup>0</sup> Peel adhesion		<b>4930</b>		350N/100mm		
		<b>4945, 4950</b>		440N/100mm		
		<b>4959</b>		350N/100mm		
Normal Tensile		<b>4930</b>		1100kPa		
		<b>4945, 4950</b>		970kPa		
		<b>4959</b>		520kPa		
Dynamic shear		<b>4930</b>		690kPa		
		<b>4945, 4950</b>		550kPa		
		<b>4959</b>		380kPa		
Static Shear		<u>22<sup>0</sup>C</u>		<u>66<sup>0</sup>C</u>	<u>93<sup>0</sup>C</u>	<u>121<sup>0</sup>C</u>
		<b>4930 4945, 4950</b>		1500g	500g	500g
		<b>4959</b>		1500g	1000g	750g
Temperature Resistance	<b>4930, 4945</b> <b>4950</b> <b>4959</b>	Short term		149 <sup>0</sup> C		
		Long term		93 <sup>0</sup> C		
		Short term		204 <sup>0</sup> C		
		Long term		149 <sup>0</sup> C		
UV resistance		Excellent				
Solvent resistance		High				

\*Not recommended for specification purposes

## Test Methods

90° Peel Adhesion: Stainless Steel, 72 hours dwell, Peel speed 305mm/min  
Normal Tensile: Stainless Steel, 6.45cm<sup>2</sup>, 72 hours dwell, Jaw speed 50mm/min  
Dynamic Shear: Stainless Steel, 6.45cm<sup>2</sup>, 72 hours dwell, Jaw speed 12.7mm/min  
Static shear: Weight(grams) that 3.23cm<sup>2</sup> will hold 10,000 minutes (7 days) at stated temperature

<b>Format</b>	<b>4930</b>	Available in 12.7mm, 19mm and 25.4mm x 66m rolls
	<b>4945</b>	Available in 12.7mm, 19mm, 25.4mm and 50.2mm x 33m rolls
	<b>4950</b>	Available in 12.7mm, 19mm and 25.4mm x 33m rolls
	<b>4959</b>	Available in 12.7mm, 19mm and 25.4mm x 33m rolls
<b>Application Technique</b>	<ul style="list-style-type: none"><li>• Apply between 10<sup>0</sup>C and 40<sup>0</sup>C.</li><li>• Ensure surfaces to be bonded are clean, dry and well unified.</li><li>• Most substrates can be cleaned by wiping (in one direction) with a 50/50 IPA/Water mixture.</li><li>• Where heavy grease or oils are present, 3M Citrus Cleaner or White Spirits should be used to remove the grease. This should always be followed by a wipe with the IPA/Water mixture to remove any residue.</li><li>• Abrasion or scuffing may enhance adhesion by increasing the surface area. Always follow with a wipe with IPA/Water to remove any residue.</li><li>• Firm application pressure helps develop better adhesive contact and improves bond strength.</li></ul>	
<b>Application ideas</b>	<ul style="list-style-type: none"><li>• Bond metals in truck and trailer assembly</li><li>• Bond handles to glass</li><li>• Attaching signs, nameplates and plaques</li><li>• Bond signs to frames</li><li>• Attach stiffeners in air conditioners</li></ul>	
<b>Testing</b>	Always test the suitability of the product for your application before use.	
<b>Shelf life</b>	Store in a dry location out of direct sunlight and away from all sources of heat. Ideal conditions are 20°C and 50% relative humidity. Use within 24 months from date of manufacture.	
<b>Health and Safety Information</b>	This product is an “article” and does not require a Material Safety Data Sheet. However MSDSs have been produced for most articles and may be accessed by going to <a href="http://www.3m.com/msds">www.3m.com/msds</a> and entering the product number or 3M stock number. Alternatively, contact 3M Customer Services.	
<b>Further information</b>	Further information is available at <a href="http://www.3m.com">www.3m.com</a> or by contacting 3M Customer Services on Free Phone 0800 200 713 or Free Fax 0800 508 980.	
<b>Note</b>	<b>The user is responsible for determining whether the 3M product, surface preparation, and method of assembly are suitable for their particular purpose. Failure to determine the suitability of all factors involved in the application may result in bond failure.</b>	



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