VHB™ Thin Foam Tape

86415, 86420, 86425, 86430

Technical Data

Product Description

3M™ VHB™ Thin Foam Tapes 86415, 86420, 86425 and 86430 are thin foam tapes with pressure sensitive adhesive on both sides and are used for bonding a wide range of high and low surface energy materials in the electronics industry. This specially formulated foam provides superior impact resistance to meet industry drop test requirements and has high bond strength while providing good conformability

Typical Applications: Lens bonding, LCM attachment, bezel bonding.

Product Construction

Adhesive:		Acrylic
Thickness:	**86415** **86420** **86425** **86430**	0.15 mm (0.006 in) 0.20 mm (0.008 in) 0.25 mm (0.010 in) 0.30 mm (0.012 in)
Thickness Tolerance:		+/- 15%
Density:		60 lb/ft^3 (960 kg/m^3)
Liner:		0.003 in (0.08 mm) clear polyester
Tape Color:		Black

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Peel Adhesion: Stainless Steel 15 Min Dwell	**86415** **86420** **86425** **86430**	1.8 kg/25.4 mm (4.0 lb/inch, 70 N/100 mm) 2.0 kg/25.4 mm (4.3 lb/inch, 75 N/100 mm) 2.3 kg/25.4 mm (5.0 lb/inch, 87 N/100 mm) 2.6 kg/25.4 mm (5.7 lb/inch, 100 N/100 mm)
Peel Adhesion: Stainless Steel 72 Hr Dwell	**86415** **86420** **86425** **86430**	2.3 kg/25.4 mm (5.0 lb/inch, 87 N/100 mm) 2.7 kg/25.4 mm (5.9 lb/inch, 103 N/100 mm) 3.0 kg/25.4 mm (6.5 lb/inch, 114 N/100 mm) 3.5 kg/25.4 mm (7.8 lb/inch, 137 N/100 mm)
Static Shear: (stainless steel)	22°C 70°C	1000 g/0.5 sq in (holds 10,000 min.) 500 g/0.5 sq in (holds 10,000 min.)
Temperature Resistance: **Short Term:** (minutes, hours) **Long Term:** (days, weeks)		 121°C (250°F) 82°C (180°F)

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Typical Physical Properties and Performance Characteristics ***(continued)***

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Adhesion to various surfaces

90 degree peel adhesion
72 Hr Dwell

		3M™ VHB™ Electronic Foam Tape			
		86415	**86420**	**86425**	**86430**
Glass	**kg/25.4mm**	**2.3**	**2.7**	**3.0**	**3.5**
	(lb/inch)	5	5.9	6.5	7.8
	(N/100mm)	88	103	114	157
Polycarbonate	**kg/25.4mm**	**2.0**	**2.3**	**2.8**	**3.2**
	(lb/inch)	4.4	5.0	6.2	7.0
	(N/100mm)	77	88	109	123
ABS	**kg/25.4mm**	**1.7**	**2/0**	**2.3**	**2.6**
	(lb/inch)	3.8	4.4	5.1	5.8
	(N/100mm)	67	77	89	102
Polypropylene	**kg/25.4mm**	**1.6**	**1.8**	**2.0**	**2.3**
	(lb/inch)	3.5	3.9	4.5	5.1
	(N/100mm)	61	68	79	89

Available Sizes

Standard Length:	65.8 meters (72 yards)
Minimum Length:	
1 inch (25.4 mm) to 8 inch (203 mm)	329 meters (360 yards)
All other	165 meters (180 yards)
Minimum Width:	12.7 mm (0.5 inch)
Maximum Width:	1170 mm (46 inch)
Slitting Tolerance:	+/- 0.8 mm (1/32 in)
Core Size (ID):	76.2 mm (3.0 in)

Application Guidelines

For maximum bond strength the surfaces should be thoroughly cleaned with a 50:50 mixture of isopropyl alcohol and water. Consult manufacturers directions for use and precautions when using cleaning solvents. Ideal tape application is accomplished when temperature is between 21°C and 38°C (between 70°F and 100°F) and the bond is allowed to dwell 72 hours. Initial tape application to surfaces at temperatures below 10°C (50°F) is not recommended.

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Shelf Life

24 Months from date of shipment when stored at 4°C to 38°C (40°F to 100°F) and 0-95% relative humidity. The optimum storage conditions are 22°C (72°F) and 50% relative humidity.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

Limited Warranty

3M warrants for 24 months from the date of shipment that 3M™ VHB™ Tape will be free of defects in material and manufacture. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. This limited warranty does not cover damage resulting from the use or inability to use 3M™ VHB™ Tape due to misuse, workmanship in application, or application or storage not in accordance with 3M recommended procedures. AN APPLICATION WARRANTY EXPRESSLY APPROVED AND ISSUED BY 3M IS AN EXCEPTION. THE CUSTOMER MUST APPLY FOR A SPECIFIC APPLICATION WARRANTY AND MEET ALL WARRANTY AND PROCESS REQUIREMENTS TO OBTAIN AN APPLICATION WARRANTY. CONTACT 3M FOR MORE INFORMATION ON APPLICATION WARRANTY TERMS AND CONDITIONS.

Limitation of Remedies and Liability

If the 3M™ VHB™ Tape is proved to be defective within the warranty period stated above. THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M™ VHB™ TAPE. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including negligence, warranty, or strict liability.

ISO 9001

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

3M

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