



Technical Data Sheet

3M™ VHB™ Thin Foam Tape 86420



[Regulatory Info/SDS](#)

Product Description

Finite Element Analysis (FEA) data is available for this product at: 3m.com/FEA

3M™ VHB™ Thin Foam Tape 86420 is a thin foam tape with pressure sensitive adhesive on both sides and is used for bonding a wide range of high and low surface energy materials in the electronics industry. This specially formulated foam provides impact resistance and high bond strength while providing good conformability.

Product Features

- Thin foam tapes with pressure sensitive adhesive (PSA) on both sides
- Good impact resistance and conformability
- High bond strength

Technical Information Note

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

Typical Physical Properties

Attribute Name	Test Method	Value
Adhesive Type		Acrylic
Density	ASTM D3574	960 kg/m ³ (60 lb/ft ³) ¹
Total Tape Thickness	ASTM D3652	0.2 mm (8 mil)
Color		Black
Liner		Polyester
Liner Thickness		0.08 mm (3 mil)
Primary Liner Color		Clear
Thickness Tolerance		± 15 %

¹ Foam with adhesive

Typical Performance Characteristics

90° Peel Adhesion

Temperature: 23 °C (73 °F)

Backing: 2 mil PET

Test Method: ASTM D3330

Dwell Time	Substrate	Value
15 min	Stainless Steel	7.5 N/cm (69 oz/in) ¹
72 h	Polycarbonate (PC)	9 N/cm (82 oz/in) ¹
72 h	Polypropylene (PP)	7 N/cm (64 oz/in) ¹
72 h	Stainless Steel	10.5 N/cm (96 oz/in) ¹
72 h	Glass	10.5 N/cm (96 oz/in) ¹
72 h	ABS	8 N/cm (73 oz/in) ¹

¹ 304 mm/min (12 in/min)

Static Shear

Substrate: Stainless Steel

Temperature	Value
23 °C (73 °F)	500 g/0.5 in ² ¹
70 °C (158 °F)	250 g/0.5 in ² ¹

¹ Holds 10,000 min.

Attribute Name	Value
Short Term Temperature Resistance	93 °C (200 °F) ¹
Long Term Temperature Resistance	70 °C (158 °F) ²

¹ Short Term (minutes, hour)

² Long Term (day, weeks)

Handling/Application Information

Application Examples

Lens bonding, LCM attachment, bezel bonding.

Application Techniques

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.

Storage and Shelf Life

Store in original cartons at 4-38°C (40-100°F) and 0-95% relative humidity. Optimum storage conditions are 22°C (72°F) and 50% relative humidity. When stored under proper conditions, product retains its performance and properties for 24 months from date of manufacture.

Available Sizes

Attribute Name	Width	Value
Core Size (ID)		76.2 mm (3 in)
Maximum Available Width		1170 mm (46 in)
Minimum Available Width		12.7 mm (0.5 in)
Minimum Length	1 inch(25.4 mm) to 8 inch(203 mm)	329 m (360 yd)
Minimum Length	All other	165 m (180 yd)
Normal Slitting Tolerance		± 0.8 mm (± 1/32 in)
Standard Roll Length		65.8 m (72 yd)

Automotive Disclaimer

Select Automotive Applications:

This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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