



VHB+™

4941 Conformable Acrylic Foam Tape

Product Data Sheet

Updated : March 1996
Supersedes : October 1993

Product Description

4941 is a conformable, very high bond acrylic foam tape which has added performance for bonding to plasticised vinyl due to a specially formulated adhesive which resists plasticiser migration. In addition this core adhesive composition makes the product well suited to many paints and primers.

Its improved conformability also allows more complete bond contact area when bonding rigid or irregular materials. The product has somewhat lower peel, tensile and shear performance than other VHB tape products due to its inherent softness. 4941's principal advantages are that it provides a more

uniform seal on irregular surfaces, and in visible bonds under a transparent surface it offers a more aesthetically pleasing bond. 4941 is suitable for many interior and exterior industrial applications.

Physical Properties

Not for specification purposes

Adhesive Type	Acrylic	3M ref :
Foam Density	720 kg/m ³	
Thickness (ASTM D-3652) Tape Liner Total	1.10mm ± 15 % 0.10 mm 1.20 mm	
Adhesive Carrier	Acrylic Foam (Closed Cell)	
Release Liner	Printed Paper	
Tape Colour	Dark Grey	
Shelf Life	24 months from date of despatch by 3M when stored in the original carton at 21°C (70°F) & 50 % Relative Humidity	

Performance Characteristics

Not for specification purposes

Peel Adhesion to Stainless Steel 90° peel @ room temp, 72 hr dwell, jaw speed 300mm/min	350 N/100mm 20 lb/in	
Static Shear Strength weight held for 10,000 mins to stainless steel with ½ sq in (3.23 sq cm) overlap	1000g @ 22°C 500g @ 70°C	
Temperature Performance Max (minutes/hours) Max Continuous (days/weeks)	150 °C 93 °C	

Date : March 1996
4941 Conformable Acrylic
Foam Tape

Performance Characteristics (Cont...)
Not for specification purposes

Normal Tensile (T-Block)

to Aluminium at room temp,
6.45 sq cm, jaw speed 50 mm/min

58.5 N/cm²

Application Techniques

1. Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure develops better adhesive contact & thus improves bond strength.

2. To obtain optimum adhesion, the bonding

surfaces must be clean dry and well unified. A typical surface cleaning solvent is isopropyl alcohol & water. Use proper safety precautions for handling solvents.

3. Ideal tape application temperature range is 21°C to 38°C (70°F to 100°F).

Initial tape application to surfaces at temperatures below 15°C is not recommended because the adhesive becomes too firm to adhere readily. However once properly applied low temperature holding is generally satisfactory.

NOTE* Some paint systems and plastics contain additives which can influence adhesion. Adhesion to these surfaces should be evaluated carefully; the effects of these additives can often be overcome by proper cleaning and surface preparation. High humidity/high temperature environments can also affect adhesion to glass due to the hydrophilicity of glass. Under these environments a silane coupling agent (adhesion promoter) has been found to enhance the durability and strength of the bond.

Applications

This product has been found to be particularly suitable for bonding wooden (primed), aluminium (anodised) and PVC Georgian glazing bars (muntin bars) to glazing units. The plasticiser resistant adhesive also allows for successful bonding of flexible PVC Glazing bars.

The conformable nature of the acrylic foam core allows for good 'wetting out' of the adhesive to the glass surface thus providing good adhesive to surface contact. Also, good contact eliminates unsightly air bubbles. Primers might be appropriate when bonding such systems.

VHB+ 4941 tape has also been found excellent when bonding to relatively irregular surfaces such as grained wood. (Care must be taken to provide a good unified surface through priming.)

3M and VHB are trademarks of the 3M Company.

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.



Specialty Tapes & Adhesives

3M United Kingdom PLC
3M House,
28 Great Jackson Street,
Manchester,
M15 4PA

Customer Service :
Tel 0161 236 8500
Fax 0161 237 1105

3M Ireland
3M House, Adelphi Centre,
Upper Georges Street,
Dun Laoghaire, Co. Dublin,
Ireland

Customer Service :
Tel (01) 280 3555
Fax (01) 280 3509

© 3M United Kingdom PLC 1996