Product Data Sheet

Updated : Oct: 2002 Supersedes : NEW

Product Description

 $3M^{\text{TM}}$ VHBTM Acrylic Foam Tape 5962 is a double-coated (1.55mm) pressure sensitive adhesive tape for bonding a wide range of substrates, including lower surface energy materials such as powder coated paints and plastics. The foam is conformable to increase contact with the surfaces.

Construction

Adhesive Type:	Synthetic
Thickness:	1.55mm
Density	640 kg/m³
Liner	Red polyethylene film
Tape Colour	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.

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Peel Adhesion Stainless Steel	35 N/10mm
Normal Tensile:	620 kPa
(aluminium T-block	
Dynamic Shear:	
(stainless steel)	550 kPa
Static Shear:	1500 g/0.5 sq. in. (holds 10,000 min.)
(stainless steel)	500 g/0.5 sq. in. (holds 10,000 min.)
	500 g/0.5 sq. in. (holds 10,000 min.)
	250 g/0.5 sq. in. (holds 10,000 min.)
Solvent Resistance:	High
Shelf Life:	24 months from date of manufacture
	(stored in original cartons, 20°C 50% RH)
Temperature Resistance:	
Short Term: (minutes,hours)	150°C
Long Term: (days, weeks)	120°C

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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 20° and 40°C and the bond is allowed to dwell 72 hours. Initial tape application to surfaces at temperatures below 10°C is not recommended.

Additional Product Information

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

To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Typical surface cleaning solvents are isopropyl alcohol/water mixture (rubbing alcohol) or heptane. Use proper safety precautions for handling solvents.

It may be necessary to seal or prime some substrates prior to bonding.

- a. Most porous or fibred materials (e.g. wood) will require sealing to provide a unified surface.
- b. Some materials (e.g. copper, brass, plasticised vinyl) will require priming or coating to prevent interaction between adhesive and substrates.

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Applications

VHB Joining Systems are suited for use in many interior and exterior industrial applications. In many situations, they can replace rivets, spot welds, liquid adhesives and other permanent fasteners.

Each product in the VHB family has specific strengths. These can include high tensile, shear and peel adhesion and resistance to solvents, moisture and plasticiser migration.

All VHB tapes should be thoroughly evaluated by the user under actual use conditions with intended substrates, especially if expected use involves extreme environmental conditions.

VHB Joining Systems are suitable for bonding a variety of substrates, including sealed wood, many plastics, composites and metals. Plastics which can be a problem are polyethylene, polypropylene, PTFE, silicones and other low surface energy materials.

Plasticised vinyl bonding is dependent on the types and concentrations of plasticisers which can migrate into the adhesives causing a reduction in bond strength; 4941 and 4945 are most resistant to plasticiser migration.

Galvanised surfaces are potential problems and should be carefully evaluated.

To prevent corrosion on copper and brass, only lacquer coated material should be used within VHB Joining Systems.

Thorough evaluations are recommended when bonding is required to any questionable surface.

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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.



Tapes & Adhesives

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