



Science.
Applied to Life.™

3M™ VHB™ Tapes

Construction Brochure

For Structural Glazing & Architectural Panels

3M Industrial Adhesives and Tapes Division

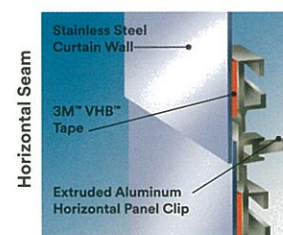
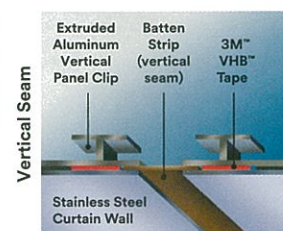
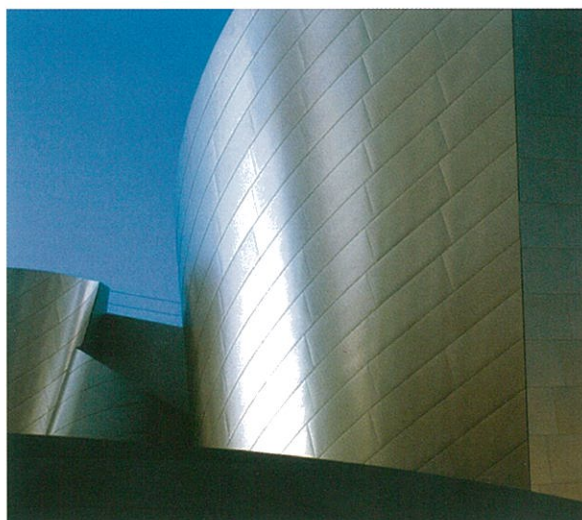
3M™ VHB™ Tapes for Cladding, Stiffeners and Architectural panels - VHB AGT

Proven for More Than 30 Years in Applications from Denver to Dubai

For quick permanent assembly of cladding and curtain wall panels, 3M™ VHB™ Tapes provide an ideal combination of durability, performance and application ease.

Bond to a wide range of architectural panel substrates including dissimilar materials. With design flexibility, create visibly stunning facades.

Application warranty available for qualifying applications in select countries.



Tape	Tape Thickness w/o liner in mm	Adhesive Type	Adhesive carrier	Color	Peel Strength	Tensile Strength (see units)	Dynamic Overlap Shear (See units)	Static Shear Strength (See units)	Density kg/m ³	Temperature (in celsius, LT-ST)	Application
4959F	3mm	General Purpose Acrylic	Acrylic Foam	White	350N/100mm	520 kPa	380kPa	1000g @ 66c	800 kg/m ³	149-204	Cladding, Panel Stiffener bonding, Glass Paneling, Wooden Cladding, Metal and Plastic Bonding, Bonding high and medium surface energy substrates
W20F	2mm	Modified Acrylic	Acrylic Foam	White	350N/100mm	950 kPa	480kPa	1000g @ 66c	720 kg/m ³	150-200	
4956F	1.6mm	Multi Purpose Acrylic	Acrylic Foam	Gray	390N/100mm	550kPa	480kPa	500g @ 93C	720 kg/m ³	93-149	
4941F	1.1mm	Multi Purpose Acrylic	Acrylic Foam	Gray	390N/100mm	590kPa	480kPa	500g @ 93C	720 kg/m ³	93-149	

3M™ VHB™ Tape for General Purpose High Temperature Applications

Product Number	Tape Thickness w/o liner in mm	Adhesive Type	Adhesive carrier	Color	Peel Strength	Strength (see units)	Dynamic Overlap Shear (See units)	Static Shear Strength (See units)	Density kg/m ³	Temperature (in celsius, LT-ST)	Application
GPH 160	1.6 mm	Multi Purpose Acrylic	Acrylic Foam	Gray	340N/100mm	470N/ 6.54cm ²	375N/ 6.54cm ²	500g @ 150C	710 kg/m ³	150-230	Signage, Mounting applications, Stiffener application, Can go through powder coating process
GPH 110	1.1 mm	Multi Purpose Acrylic	Acrylic Foam	Gray	370N/100mm	438N/ 6.54cm ²	476N/ 6.54cm ²	500g @ 150C	710 kg/m ³	150-230	

3M™ Primers

Product Number	Solvent	Active Ingredients	VOCs	Color	Flashpoint	Coverage	Product Features
Universal Primer	See SDS	See SDS	429 g/L	Clear UV-indicator verification	-21° C	600 ft ² /gal (211m ² /L)	Adhesion promoter, Low VOC UV-Indicator verifies primer application Quick dry time
AP115	Isopropyl Alcohol and Water	Less than 1% by weight	6.08 lbs./gallon (728g/L)	Clear	53°F (12°C)	20-25 ft ² per 4 fl. oz. bottle (1.8-2.3m ² per 118mL bottle)	Promote better adhesion for glass.
Primer 94	See SDS	See SDS	Approx 6.3 lbs./gallon (755g/L) less H2O and exempt solvents	Clear Light Yellow/ Clear Dark Orange	-4°F (-20°C)	600 ft ² /gal (211m ² /L)	Promote better adhesion for a variety of plastic surfaces such as polyethylene, polypropylene, ABS and PET/PBT blends.

3M™ Cylinder adhesive

Product	Base	Solids Content (by wt.)	Colour	VOC	Coverage	Spray Pattern	Dry Time	Bonding Range	Applications
HoldFast 70 (27.3lbs)	Synthetic Elastomer	21%	Translucent	544g/L	230m ²	Lace	30 sec - 1 min	30 sec - 60 min	Bonding Insulation Panel, Bonding Rockwool Panel

3M™ VHB™ Structural Glazing Tapes - VHB SGT

Application Ease and Immediate Handling Strength for Increased Productivity

3M™ VHB™ Structural Glazing Tapes have been proven in thousands of buildings worldwide since 1990 as an alternative to structural silicone and spacer tapes/gaskets.

Immediate handling strength results in faster throughput and delivery. No mixing or curing simplifies manufacturing.

Proven technology with a 30+ year history in construction, an application warranty* is available for qualifying applications in select countries.



Product Number	Tape Thickness w/o liner in mm	Adhesive Type	Adhesive carrier	Color	Peel Strength	Tensile Strength (see units)	Dynamic Overlap Shear (See units)	Static Shear Strength (See units)	Density kg/m3	Temperature (in celsius, LT-ST)	Application
B23F	2.3mm	High Performance Acrylic	Acrylic Foam	Black	350N/100mm	480 kPa	450kPa	500g @ 66c	720 kg/m3	93-149	Glass Bonding on UCW panels, Structural Glazing, Interior Glazing
G23F	2.3mm	High Performance Acrylic	Acrylic Foam	Gray	350N/100mm	480 kPa	450kPa	500g @ 66c	720 kg/m3	93-149	Glass Bonding on UCW panels, Structural Glazing, Interior Glazing

*3M™ VHB™ Structural Glazing Tapes are only available for structural glazing applications approved by 3M Technical Service through select distributors.

Optimizing 3M™ VHB™ Tape performance on a wider variety of surfaces

3M™ VHB™ Tapes bond permanently to most surfaces when application requirements are met.

Clean

In most cases, simply clean substrate with an IPA/water mixture.

Pressure

Apply 15 psi at the bond line.

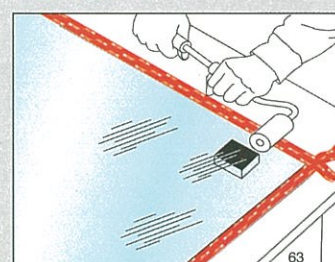
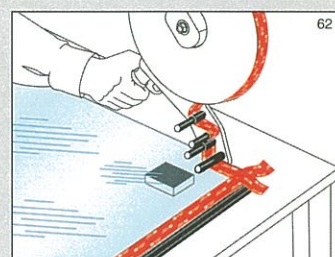
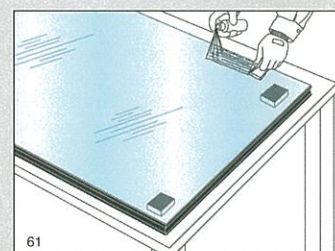
Temperature

Typically apply at 50-60°F (10-26°C). Some VHB tapes can be applied as low as 32°F (0°C).

Time

Instant tack at room temperature.

Time	Bond strength
20 min.	50%
60 min.	75%
24 hrs.	90%
3 days	100%



- General Purpose Acrylic** : Bond to most higher surface energy substrates including metal, glass and surface energy plastics.
- Multi Purpose Acrylic** : Bonds to a wide range of materials including metals, glass and high and medium surface energy plastics and paints. Resists migration of plasticizers in vinyl substrates.
- Modified Acrylic** : Bonds to Medium low surface energy paints and plastics, including many powder coated paints in addition to the substrates listed with the multi-purpose acrylic adhesive (except plasticized vinyl)
- High Performance Acrylic** : Form bonds with exceptional strength and higher durability and elasticity

Exterior applications

Simplified application saving time and materials

- Speeds assembly and delivery
- Bonds on contact with no drying, fixturing, and liquid mess
- Saves the time, labor, and materials of spacer tape, gasketing, masking, and clean-up
- Eliminates the time and testing of 2-part systems for glass/butterfly, snap time, and mix ratio

The power of viscoelasticity

- Absorbs shock and allows movement for reliability against wind and vibration
- Compensates for thermal expansion/contraction

Conformability

- Bonds to a variety of surfaces to simultaneously bond and seal

Withstands wind, heat, cold, sway, and vibration

- Bond with high holding strength to replace screws, rivets, welds, and silicones for static and dynamic loads
- Elastic properties absorb shock and flexing for reliability against wind, vibration, and thermal expansion/contraction
- Fill irregularities and gaps between surfaces to help keep out dirt, water, and cleaning chemicals

Expands the range of design and material options

- Join many surfaces including dissimilar materials; tape prevents bi-metallic corrosion
- Use lighter weight and thinner substrates
- Bond most painted and powder coated surfaces, and hard-to-bond plastics such as acrylic and polycarbonate

Applies easily to save time, money and labor

- PSA (pressure sensitive adhesive) tape bonds on contact with no drying time or fixturing
- Save processing steps such as drilling, screwing, welding, clean-up, and refinishing
- Easy-to-use; bond metal, glass, and most plastics with minimal surface preparation

Beauty, not the tape, is in the eye of the beholder

- Virtually invisible fastening helps keep surfaces smooth and clean to enhance design and appearance
- Use a wider variety of materials more readily for high impact visual combinations



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