Checklist for 3M VHB™ Structural Glazing Tape

This checklist has been designed for architects, engineers, and glass and glazing companies that are considering the use of 3M VHB[™] Structural Glazing Tape (SGT) or who have made the decision to use this glazing method and need a quick reference tool to make sure all the necessary steps have been identified.

CURTAIN WALL DESIGN DETAILS FOR ARCHITECTS AND ENGINEERS

- The bond area must be flat with no grooves or reglets for spacer gaskets
- The Glazing Pocket Depth is less than a typical silicone or dry gasket system due to the 90 mil thickness (2.3mm) of the structural glazing tape.
- The bond width or "bite" must be sized appropriately to accommodate the width of the SGT to meet the project design pressure.
- The tape itself is not the primary weather seal however the closed cell nature of the tape allows it to act as a secondary weather seal.



2 DESIGN GUIDELINES

The VHB[™] Structural Glazing Tape is the most well researched and best understood tape in the history of the pressure-sensitive tape industry! The 3M technical staff has done an outstanding job of outlining the critical physical properties of the SGT to keep in mind as you work through the design details.

Tensile strength for dynamic loads:

Ultimate Dynamic Strength	Dynamic Load Design Strength (Glass and Metal Panels)	
70 psi (480 kPa) ASTM D897	12 PSI (85 KPA)	

Sheer strength for static loads (dead loads)

Static Load Design Strength	Tape Required
.25 psi (1.75 kPa)	4in ² tape per lb supported

Sheer strength for differential loads

Design Shear Strain	Tape Thickness	Allowable Differential Movement in Shear
.25 psi (1.75 kPa)	.25 psi (1.75 kPa)	.25 psi (1.75 kPa)

Thermophysical Properties

VHB™ SGT	conductivity (k)
3M™VHB™Structural Glazing Tape G23F (0.090'')	0.1373 W/m-K
3M™ VHB™ Structural Glazing Tape B23F (0.090")	0.1378W/m-K

3 CURRENT CURTAIN WALL SYSTEMS USING SGT

Stick-Built Cassette Systems	
EFCO Corporatio Kawneer Oldcastle Building Envelope® Wausau Window & Wall Systems YKK AP America	Series 5600 & 5900 Cassette Wall Systems Clearwell™ SSIT / SBIT Curtain Wall System Reliance™ Cassette Curtain Wall System Wausau SuperWar™ 10250 SSG System YCW 750 SSG Curtain Wall System
Unitized Curtain Wall Systems	
Harmon, Inc. Kawneer National Glass & Metal Company Oldcastle BuildingEnvelope® Schuco	UCV13000T Curtain Wall System 2500 UT Unitwalls. System NGMCO Series 300 Unitized Cassette System Reliance™ Unit Wall System —Captured and Non-captured UCC 81 Curtain Wall System FW50+ Curtain Wall System SFC85 (Type A/B) Curtain Wall System
Window Wall & Ribbon Window Sys	tems
Kawneer Oldcastle BuildingEnvelope® Schuco	PG 123® Framing System 6000 SGHT Window Wall System Reliance" Window Wall System SFC85 Respirant Curtain Wall System
Entrance Doors	
Kawneer STANLEY: Access Technologies, LLC	3501R Outswing Aluminum Storefront Door System Durastorm" Access 3000 Door System
Storefront Systems	
Oldcastle BuildingEnvelope®	Pre-Glazed Storefront System
Vent Window Systains	
Alliance Window Window Company, Inc. Arcadia Kawneer Oldcastle BuildingEnvelope® Schuco Winco Window Company	2100 Series Inswing Window System CV-200 Window Vent System GLASSvent" Windows Access 42 Interior Window System Series 37 Vent Window System Series CV Vent Window System AWS 102 (Type A) Window System AWS 60BG Window System AWS75BS.V8 Window System 3325 Series Projected Casement Window
Skylights & Canopy	
Bellweat her Design Technologies, LLC DeaMor Engineered Skylights United Skys Wasco Skylights	Hipped Ridge Skylight System Pyramid Skylight System Single Slope Skylight System Trellis Skylight Canopy System Series 6000 Skylight and Curtain Wall System Apex Curb Skylight System CA Sill Skylight System CS Sill Skylight System RS Skylight System
Interior Glass Panel	
Forms + Surfaces® Monarch Metal Fabrication	LEVELe® Wall Cladding Systems MFTape Z Clip System

4 CURTAIN WALL DESIGN DETAILS FOR ARCHITECTS AND ENGINEERS

Once you have an architect who wants to use the 3M SGT in the design, the actual project initiation and approval process falls to the fabricator or glazier. The good news is that the process has been streamlined and a significant portion of it can be done online.

The steps are easy to follow and your 3M Authorized Distributor or the folks at Project Vision Dynamics who handle all the front end activities are here to help.

- □ Visit the Project Vision Dynamics website at projectvisiondynamics.com and access the 3M VHB Portal.
- Fill in the Project Initiation Form and upload the drawings. The drawings are required in order to initiate the Technical Service Request
- □ (TSR) with the 3M Technical Service Group. Files larger than 30MB will have to be downloaded from a cloud based program.
- 3M Tech Service will initiate the technical application review and will send mailing labels to you so that samples of the actual extrusions and glass can be sent to 3M for adhesion testing. It is important to acquire these extrusion and glass samples to enable the tech service group to accurately identify the proper primers and assembly steps necessary for the best field performance.
- Send the samples as directed and allow 10 business days for the testing to be completed and a TSR Test Report and Standard Operating Procedure to be submitted to you.
- Order the 3M SGT, appropriate primers, and accessories from your authorized 3M distributor.
- Contact your authorized distributor to schedule the mandatory on-site training for all crew members who will be fabricating units with the SGT.
- Conduct the training and have all trained crew sign the training document. The 3M distributor will make sure the training document is uploaded to the PVD website.
- Begin production.
- If a warranty is requested, subsequent audits by the distributor and 3M technical staff will be scheduled to verify compliance with the SOP document.



That's it. It's really not hard at all. For the architects, if you have any technical questions about specific SGT properties or test data, please contact Rick Alexander at Tom Brown, Inc. **(412-652-2403)** or Steve Sherman at Project Vision Dynamics **(813-659-0675)** and we will provide any support studies or documentation that is required.

For the Glass and Glazing houses, contact Rick Alexander, Shane Walsh, Craig Seifert, or Brendan Brown for any project support or to order any needed tape, primers, and accessories. We're here to help!

CONTACT TOM BROWN, INC. TODAY TO LEARN MORE.