

To: Whom It May Concern
From: Dave Panning (dpanning@bifma.org)
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Subject: **Test Considerations for Glass Markerboards**

The current ANSI/BIFMA safety and performance standards generally do not apply to Glass Markerboards. As such, a manufacturer of Glass Markerboards may want to consider the following guidance from members of the BIFMA community and other interested stakeholders. This document is intended to provide minimum safety recommendations for Glass Markerboards. It does not address non-safety related performance items. The horizontal and vertical strength tests, and creep (long-term static loading) tests given in this document may also be applicable to non-glass markerboard products.

The tests given in this document are intended to assess the structural performance of the markerboard and the attachment components (brackets, standoffs, etc.). The ultimate performance of markerboards is usually dependent on the structure of the wall or other system to which it is mounted. The manufacturer typically provides recommendations and/or minimum requirements for the wall construction and/or fasteners (brackets, toggle bolts, molly bolts, wall-anchors, etc.); however, the performance of the wall is beyond the control of the manufacturer. The tests given in this document may be conducted on test frames that isolate the performance of the markerboard products, however, these tests may also be useful in assisting a manufacturer in developing minimum recommended wall constructions and/or fastener recommendations.

For the purposes of this document, the following definition applies:

Markerboard – Also known by the terms dry-erase surface, wipe board, or dry-wipe surface. A markerboard is a product having a writing surface with or without a frame used with nonpermanent “dry erase” markers allowing temporary marking and erasing of writing/drawing on their surface. Markerboards are prevalent in many offices, meeting rooms, school classrooms, and other work environments. These products may be wall-mounted or be freestanding for mobile applications (with or without casters). Some markerboards are designed to allow the use of magnets to hold documents.

Glass markerboards: Typically back-coated; or translucent glass used over a wall finish, to achieve certain aesthetics, while still providing a dry erase surface. Glass markerboards may have

surface or back coatings/treatments to facilitate writing on opaque surfaces. Glass markerboards may have a surface treatment and/or back coating designed for use with projection systems.

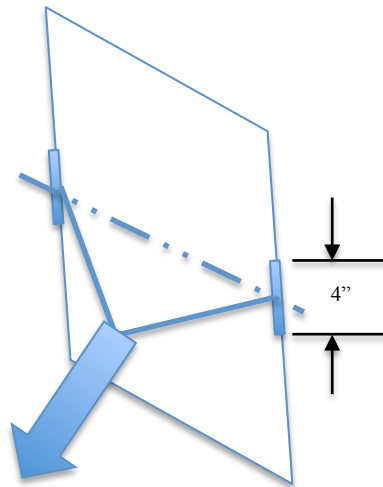
The following recommendations pertain to the safety performance of these products. Surface performance (writability, cleanability, etc.), are not covered.

Note: The ANSI/BIFMA X5.6-2016 Panel Systems standard has tests/requirements for stability and caster durability that would apply to freestanding and mobile units.

Some applicable tests may include:

1. Horizontal Pull Test

This test evaluates the performance of the products when subjected to a horizontal pull that may result from removal attempts or other loadings such as a handle for moving mobile products. It will determine the adequacy of the markerboard attachment mechanism.



Purpose: Assure the strength of the board/attachment method.

Method: Attach the markerboard to the test frame/fixture. Attach a load adapter to the markerboard at the midpoint of each side at its vertical center. The test fixture shall be designed

to distribute the load through a 4-inch high by 1-inch deep area on the board. Apply a harness to each fixture such that a horizontal load/force may be applied to the markerboard distributing the load evenly through each fixture. Gradually apply a horizontal (functional) load/force of 100 lbs. Release the load and assess the board and mounting hardware for damage. Apply a second horizontal (proof) load/force of 150 lbs. Remove the force.

Acceptance level:

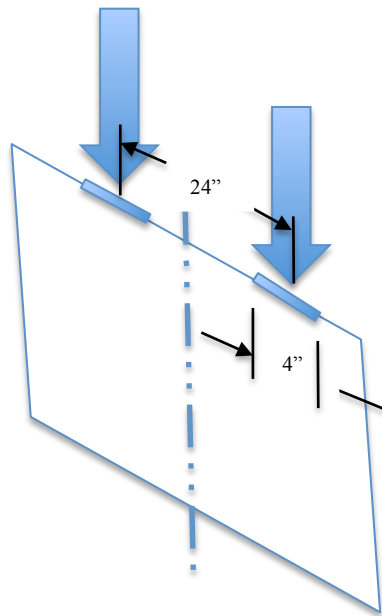
Functional loading: There shall be no loss of serviceability* as a result of the force application.

Proof loading: The markerboard shall not become dislodged from the test fixture and there shall be no cracking or breaking of glass surfaces. Bending of the attachment hardware is acceptable.

2. Vertical Load Test

This test evaluates the performance of the products when subjected to a vertical force that may result from normal loadings, board removal attempts or potential misuse by children climbing.

Vertical Load Test method:



Purpose: Assure the strength of the board/attachment method.

Method:

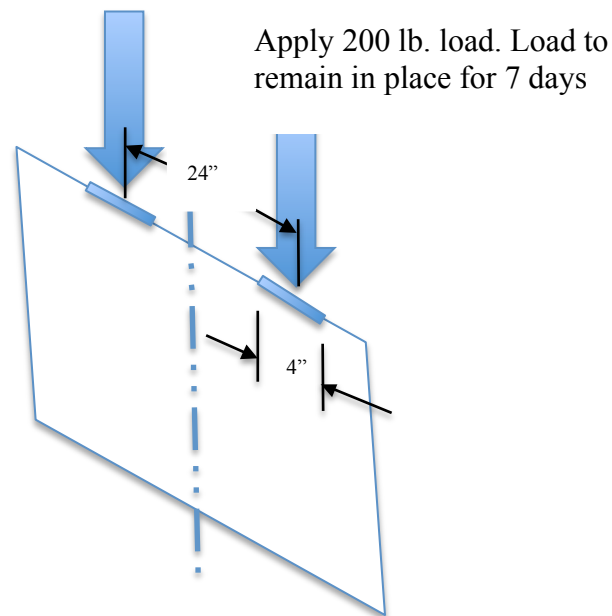
Attach the markerboard to the test fixture. Gradually apply a vertically downward load/force of 275 lbs. through two load adapters that distribute the load through a 4-inch distance, centered 24

inches equidistant from the vertical centerline of the board or even with the edge of the board (for narrow boards). Release the load/force and assess the board and mounting hardware for damage. Apply a second vertical downward (proof) load/force of 413 lbs. Remove the force.

Acceptance level:

Functional loading: There shall be no loss of serviceability as a result of the force application.

Proof loading: The markerboard shall not become dislodged from the test fixture and there shall be no cracking or breaking of glass surfaces. Bending of the attachment hardware is acceptable.



3. Vertical Creep (Long-term Static Load) Test

This test evaluates the performance of the products when subjected to long-term loading of the board to evaluate the hanging hardware, adhesion of paints/adhesives to the glass surface, etc.

Vertical Creep Test method:

Purpose: Assure the strength of the board/attachment method.

Method: Apply a load of 200 lbs. to the top surface of the board through two load adapters that distribute the load through a 4-inch distance, centered 24 inches equidistant from the vertical

centerline of the board or even with the edge of the board (for narrow boards). The load shall remain in place for 7 days.

Acceptance level: There shall be no loss of serviceability*

*Loss of serviceability is defined as “The failure of any product to carry its intended load or to perform its normal function or adjustments. Cracked or broken glass is considered a loss of serviceability.” (See also BIFMA Loss of Serviceability Guideline)

4. Glass Used for Markerboards

Glass must meet the specifications on flat glass laid out in *ASTM C1036-12 Standard Specification for Flat Glass*.

5. Tempering or Laminating

Glass used in markerboards shall be safety glass. The two most common processes for safety glass are tempering (heat-strengthening) and laminating. The applicable sections of ASTM C1048 which outlines safety guidelines for tempered glass and laminated glass should be considered. ANSI Z97.1 also outlines standards for safety glass. **Note:** SGCC (Safety Glazing Certification Council) certifies manufacturers to these standards. In addition, the SGCC also regulates “approved” laminating films that can be used for laminated glass.

6. Seismic Consideration

Some locations, especially those located in certain seismic zones, may require special mounting considerations or restrictions for items such as markerboards that are attached to building walls or structures. Consult local building codes or officials for additional information.

BIFMA wishes to thank the following individuals for their input. These individuals do not necessarily endorse these tests but rather have provided some input:

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Please contact the Director of Technical Services at BIFMA should there be any questions.