

# Shear Resistance Classifications for SHEETROCK® MH Brand Gypsum Panels



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		3/8, 1/2, & 5/8 in.	SHEETROCK® MH Brand Gypsum Panel (TUF-BASE™)		

(1) All SHEETROCK MH Brand Gypsum Panels are UL Classified as to shear resistance and fire hazard properties to ensure compliance with "HUD Manufactured Home Construction and Safety Standards."

**Note:** The SHEETROCK MH Brand TUF-BASE Gypsum Panels will provide the listed shear resistance when used in the assemblies below. However, for textured ceilings, SHEETROCK MH Brand ULTRA-BASE Ceiling Board is recommended.

**Section I  
Ceiling  
Applications**

**Ceiling Application C-001**  
*(Rosettes and Staples)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to wood roof framing spaced 16 in. o.c. with No. 16 ga. staples (1 in. crown and legs 15/16 in. longer than nominal panel thickness) spaced 4 in. o.c. along the perimeter of each board, with the staple crowns parallel to and 1/4 in. from the edge of the board and with 1-1/4 in. No. 6 wood screws in 1 in. diameter rosettes spaced 23 in. o.c. in the field. Alternatively, the crowns of the staples may be placed perpendicular to and centered across panel joints. UL File MH9733.

Ultimate Shear Resistance: 433 lb./lin. ft.

Ceiling Diaphragm Width: 12 ft.

Ceiling Diaphragm Span Between Shear Walls: 28 ft.

**Ceiling Application C-004**  
*(Staples)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to wood roof framing spaced 16 in. o.c. with No. 16 ga. staples having a 1 in. crown and legs 15/16 in. longer than nominal panel thickness spaced 4 in. o.c. along the perimeter of each board (with crown of the staples placed perpendicular and centered across or parallel to and 1/4 in. from panel joints, and parallel to and 1/4 in. from ends of board). Also fasten panels at intermediate supports with staples 12 in. o.c. in the field (with staple crowns parallel to long dimension of support). As an alternative to No. 16 ga. staples (12 in. o.c. in the field), 1 in. long (minimum) bugle head screws (spaced 10 in. o.c.) with the following dimensions may be used: Head diameter—0.315 in., Major thread diameter—0.134 in., Minor thread diameter—0.088 in. (all values are minimums). UL File MH9733.

Ultimate Shear Resistance: 433 lb./lin. ft.

Ceiling Diaphragm Width: 12 ft.

Ceiling Diaphragm Span Between Shear Walls: 28 ft.

# Shear Resistance Classifications for SHEETROCK MH Brand Gypsum Panels

**Ceiling Application C-005**  
*(Staples & Intermediate  
Foam Option)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to wood roof framing spaced 24 in.\* o.c. with No. 16 ga. staples having a 1 in. crown and legs 15/16 in. longer than nominal panel thickness spaced 4 in. o.c. along the perimeter of each board with the staple crown parallel to and 3/8 in. from the edges of the board and at intermediate supports with 1-1/4 in. No. 6 wood screws in 1 in. diameter rosettes spaced 23 in. o.c. in the field. Alternatively, the crowns of the staples may be placed perpendicular to and centered across panel joints. As an alternative, UL Classified Foamseal Inc. two-component polyurethane foam designated as FOAMSEAL F2100 Type A-ISO and B-RESIN components applied in accordance with the instructions provided with the foam materials may be used for attaching the gypsum panels to the intermediate trusses. The foam plastic is applied at the opposite sides of the bottom chord along each half of the truss in the field of the ceiling board overlapping a minimum of 8 in. at the center. The minimum in-place finished foam fillet height and width shall not be less than 3/4 in. and 1 in., respectively, at any location. UL File MH9733.

Twelve-Hour Shear Resistance: 252 lb./lin. ft.

Ceiling Diaphragm Width: 11 ft. 7.5 in.

Ceiling Diaphragm Span Between Shear Walls: 28 ft.

**Ceiling Application C-006**  
*(Rosettes and Staples)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to wood roof framing spaced 16 in. o.c. with No. 16 ga. staples (1 in. crown and 1-1/4 in. legs) spaced 4 in. o.c. along the perimeter of each board with the staple crowns parallel to and 1/4 in. from the edge of the board, and with 6d (No. 13 ga.) nails in 1 in. diameter rosettes spaced 15 in. o.c. in the field. Alternatively, the crown of the staples may be placed perpendicular to and centered across panel joints. UL File MH9733.

Ultimate Shear Resistance: 433 lb./lin. ft.

Ceiling Diaphragm Width: 12 ft.

Ceiling Diaphragm Span Between Shear Walls: 28 ft.

**Ceiling Application C-007**  
*(Staples or Nails &  
Intermediate Foam Option)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels fastened to wood roof framing spaced 24 in.\* o.c. with No. 16 ga. staples (1 in. crown and legs 15/16 in. longer than nominal panel thickness) spaced 4 in. o.c. along the perimeter of each board with the staple crowns parallel to and 3/8 in. from the edge of the board. Alternatively, the staple crowns may be placed perpendicular to and centered across the panel joints and parallel to and 3/8 in. from the ends of board and at intermediate supports with 1-1/2 in. 6d (No. 13 ga.) nails in 1 in. diameter rosettes spaced 15 in. o.c. in the field. (As an option, intermediate supports may use the above described staples 12 in. o.c. in the field with staple crowns parallel to long dimension of support.) As an alternative, UL Classified Foamseal Inc. two-component polyurethane foam designated as FOAMSEAL F2100 or F2000 Type A-ISO and B-RESIN components applied in accordance with the instructions provided with the foam materials may be used for attaching the gypsum panels to the intermediate trusses. The foam plastic is applied at the opposite sides of the bottom chord along each half of the truss in the field of the ceiling board overlapping a minimum of 8 in. at the center. The minimum in-place finished foam fillet height and width shall not be less than 3/4 in. and 1 in., respectively, at any location. UL File MH9733.

Twelve-Hour Shear Resistance: 252 lb./lin. ft.

Ceiling Diaphragm Width: 11 ft. 7.5 in.

Ceiling Diaphragm Span Between Shear Walls: 28 ft.

# Shear Resistance Classifications for SHEETROCK MH Brand Gypsum Panels

**Ceiling Application  
C-008 and C-2000**  
*(Two-Component  
Polyurethane Foam)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to trusses 24 in.\* o.c. using UL Classified Foamseal Inc. two-component polyurethane foam designated as FOAMSEAL F2100 or F2000 Type A-ISO and B-RESIN components applied in accordance with the application instructions provided with the foam materials. The foam plastic is applied at the intersection formed by the sides of the bottom chords of the trusses and the gypsum wallboard ceiling material. The foam plastic is applied to (a) both sides of the trusses across the entire width of the ceiling assembly at all ceiling board joints, (b) to opposite sides of the bottom chord along each half of the truss in the field of the ceiling boards overlapping a minimum of 9 in. at the center span and (c) to the entire length of the inside face of the end trusses. The minimum in-place finished foam fillet height and width shall not be less than 1-1/2 in. and 2 in., respectively, at any location. The minimum height of the bottom chord of the trusses shall not be less than 1-1/2 in. UL File MH9733.

Twelve-Hour Shear Resistance: 282 lb./lin. ft.

Ceiling Diaphragm Width: 11 ft. 9 in.

Ceiling Diaphragm Span Between Shear Walls: 28 ft.

**Ceiling Application  
C-009 and C-2001**  
*(Two-Component  
Polyurethane Foam)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to trusses 24 in.\* o.c. using UL Classified Foamseal Inc. two-component polyurethane foam designated as FOAMSEAL F2100 or F2000 Type A-ISO and B-RESIN components applied in accordance with the application instructions provided with the foam materials. The foam plastic is applied at the intersection formed by the sides of the bottom chords of the trusses and the gypsum wallboard ceiling material. The foam plastic is applied to (a) both sides of the trusses across the entire width of the ceiling assembly at all ceiling board joints, (b) to opposite sides of the bottom chord along each half of the truss in the field of the ceiling boards overlapping a minimum of 9 in. at the center span and (c) to the entire length of the inside face of the end trusses. The minimum in-place finished foam fillet height and width shall not be less than 3/4 in. and 1 in., respectively, at any location. The minimum height of the bottom chord of the trusses shall not be less than 3/4 in. UL File MH9733.

Twelve-Hour Shear Resistance: 141 lb./lin. ft.

Ceiling Diaphragm Width: 11 ft. 9 in.

Ceiling Diaphragm Span Between Shear Walls: 28 ft.

**Ceiling Application C-010**  
*(Staples)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to wood roof framing spaced 24 in.\* o.c. with No. 16 ga. staples having a 1 in. crown and legs 15/16 in. longer than nominal panel thickness spaced 4 in. o.c. along the perimeter of each board (with crown of the staples placed perpendicular and centered across or parallel to and 1/4 in. from panel joints and parallel to and 1/4 in. from ends of board) and at intermediate supports with staples 12 in. o.c. in the field (with staple crowns parallel to long dimension of support). UL File MH9733.

Twelve-Hour Shear Resistance: 252 lb./lin. ft.

Ceiling Diaphragm Width: 11 ft. 9 in.

Ceiling Diaphragm Span Between Shear Walls: 28 ft.

# Shear Resistance Classifications for SHEETROCK MH Brand Gypsum Panels

**Ceiling Application  
C-012 and C-2003**  
*(Two-Component  
Polyurethane Foam)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to trusses 24 in.\* o.c. using UL Classified Foamseal Inc. components polyurethane foam designated as FOAMSEAL F2100 Type A-ISO and B-RESIN components applied in accordance with the application instructions provided with the foam materials. The foam plastic is applied at the intersection formed by the sides of the bottom chords of the trusses and the gypsum wallboard ceiling material. The foam plastic is applied to (a) both sides of the trusses across the entire width of the ceiling assembly at all ceiling board joints, (b) to opposite sides of the bottom chord along each half of the truss in the field of the ceiling boards overlapping a minimum of 6 in. at the center span and (c) to the entire length of the inside face of the end trusses. Ceiling board is secured to the top plates with No. 16 ga. staples at a maximum of 4 in. o.c. The minimum in-place finished foam fillet height and width shall not be less than 1 in. and 1-3/4 in., respectively, at any location. The minimum height of the bottom chord of the trusses shall not be less than 1 in. The nominal 1 x 3 in. edge rail and nominal 1 x 4 in. top plate are spliced together with a minimum of 14 in. blocks of the same material glued together with Universal 5009 PVA adhesive and fastened together with six 1 in. crown, 1-1/4 in. leg, No. 16 ga. staples, each side of joint. UL File MH9733.

Ultimate Shear Resistance: 382 lb./lin. ft.

Ceiling Diaphragm Width: 11 ft. 9 in.

Ceiling Diaphragm Span Between Shear Walls: 44 ft.

**Ceiling Application  
C-014 and C-2004**  
*(Staples)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to wood roof trusses spaced 24 in.\* o.c. using No. 16 ga. staples (1 in crown and legs 15/16 in. longer than nominal panel thickness) spaced 4 in. o.c. with the staple crown perpendicular and centered across the board joints and with No. 6 wood screws (length 1 1/16 in. longer than nominal panel thickness) in 1 in. diameter rosettes spaced 23 in. o.c. in the field. The nominal 1 x 3 in. edge rail and nominal 1 x 4 in. top plate are spliced together with a minimum of 14 in. blocks of the same material, glued together with Universal 5009 PVA adhesive and fastened together with six 1 in. crown, 1-1/4 in. leg, No. 16 ga. staples, each side of joint. Alternatively, 1-1/4 in. nominal Type W or S drywall screws spaced 12 in. o.c. or No. 16 ga. staples with 1 in. crown and legs 15/16 in. longer than nominal panel thickness spaced 15 in. o.c. in the field (intermediate trusses) may be used in place of the plastic rosettes. UL File MH9733.

Ultimate Shear Resistance: 263 lb./lin. ft.

Ceiling Diaphragm Width: 11 ft. 9 in.

Ceiling Diaphragm Span Between Shear Walls: 40 ft.

**Ceiling Application  
C-015 and C-2002**  
*(Screws)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to wood roof framing spaced 24 in.\* o.c. using bugle head screws with the following minimum dimensions: Length—1 1/16 in. longer than the nominal panel thickness, Head diameter—0.315 in., Major thread diameter—0.134 in., Minor thread diameter—0.088 in. spaced 4 in. o.c. around the perimeter of each panel and 12 in. o.c. along the intermediate supports. UL File MH9733.

Twelve-Hour Shear Resistance: 170 lb./lin. ft.

Ceiling Diaphragm Width: 11 ft. 9 in.

Ceiling Diaphragm Span Between Shear Walls: 28 ft.

# Shear Resistance Classifications for SHEETROCK MH Brand Gypsum Panels

**Ceiling Application  
C-016 and C-2005**  
*(Two-Component  
Polyurethane Foam)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to trusses 24 in.\* o.c. using UL Classified Foamseal Inc. component polyurethane foam designated as FOAMSEAL F2100 Type A-ISO and B-RESIN components applied in accordance with the application instructions provided with the foam materials. The foam plastic is applied at the intersection formed by the sides of the bottom chords of the trusses and the gypsum wallboard ceiling material. The foam plastic is applied to (a) both sides of the trusses across the entire width of the ceiling assembly at all the ceiling board joints, (b) to opposite sides of the bottom chord along each half of the truss in the field of the ceiling boards overlapping a minimum of 6 in. at the center span and (c) to the entire length of the inside face of the end trusses. Ceiling board is secured to the top plates with 1 in. crown, leg 15/16 in. longer than nominal panel thickness, No. 16 ga. staples at a maximum of 4 in. o.c. The minimum in-place finished foam fillet height and width shall not be less than 1 in. and 1-5/8 in., respectively, at any location. The minimum height of the bottom chord of the trusses shall not be less than 1 in. The nominal 1 x 3 in. edge rail and nominal 1 x 4 in. top plate are spliced together with a minimum of 14 in. blocks of the same material, glued together with Universal 5009 PVA adhesive and fastened together with six 1 in. crown, 1-1/4 in. leg, No. 16 ga. staples, each side of joint. UL File MH9733.

Ultimate Shear Resistance: 377 lb./lin. ft.

Ceiling Diaphragm Width: 15 ft. 6 in.

Ceiling Diaphragm Span Between Shear Walls: 60 ft.

**Ceiling Application  
C-017 and C-2006**  
*(Staples)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to wood roof trusses spaced 24 in.\* o.c. using No. 16 ga. staples (1 in. crown and legs 15/16 in. longer than nominal panel thickness) spaced 4 in. o.c. with the staple crown perpendicular and centered across the board joints and with 1 in. drywall screws spaced 23 in. o.c. in the field. The nominal 1 x 3 in. edge rail and nominal 1 x 4 in. top plate are spliced together with a minimum of 14 in. blocks of the same material, glued together with Universal 5009 PVA adhesive and fastened together with six 1 in. crown, 1-1/4 in. leg, No. 16 ga. staples, each side of joint. UL File MH9733.

Ultimate Shear Resistance: 289 lb./lin. ft.

Ceiling Diaphragm Width: 15 ft. 6 in.

Ceiling Diaphragm Span Between Shear Walls: 48 ft.

**Ceiling Application C-018**  
*(Staples)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to trusses spaced 24 in.\* o.c. using No. 16 ga. staples (1 in. crown and legs 15/16 in. longer than nominal panel thickness) spaced 4 in. o.c. along the perimeter of each board and 16 in. o.c. in the field of the board with the crown parallel to the panel joints. The nominal 1 x 3 in. edge rail and nominal 1 x 4 in. top plate are spliced together with minimum 2 x 5 in., 20 ga. connector plates. PEI Report #91-1134.\*\*

Ultimate Shear Resistance: 294 lb./lin. ft.

Ceiling Diaphragm Width: 9 ft. 10 in.

Ceiling Diaphragm Span Between Shear Walls: 44 ft.

**Ceiling Application C-2007**  
*(Construction Adhesive  
and Nails)*

1/2 or 5/8 in. SHEETROCK MH Gypsum Panels or Ceiling Boards fastened to trusses 16 in. o.c. using 1/4 in. dia. beads of DAP 2000 construction adhesive applied to each truss in a long zig-zag pattern and 1-1/2 in. long, 0.122 in. dia. nails from ITW Paslode. The nails are spaced 6 in. o.c. along the board joints and 23 in. o.c. in the field of the panels. The nominal 2 x 3 in. edge rail and nominal 2 x 4 in. top plate are spliced together with 3 x 5 in., 30 ga. splice plates with four 1 in. crown, 1-1/4 in. leg, No. 16 ga. staples each side of the joint in the edge rails and six 7/16 in. crown, 1 in. leg, No. 16 ga. staples each side of the joint in the top plates. PEI Report #90-1724.\*\*

Ultimate Shear Resistance: 422 lb./lin. ft.

Ceiling Diaphragm Width: 13 ft. 8 in.

Ceiling Diaphragm Span Between Shear Walls: 40 ft.

# Shear Resistance Classifications for SHEETROCK MH Brand Gypsum Panels

**Ceiling Application  
VC-001 and VC-2001**  
*(Two-Component  
Polyurethane Foam)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to vaulted trusses 24 in.\* o.c. using UL Classified Foamseal Inc. component polyurethane foam designated as FOAMSEAL F2100 or F2000 Type A-ISO and B-RESIN components applied in accordance with the application instructions provided with the foam materials. The foam plastic is applied at the intersection formed by the sides of the bottom chords of the trusses and the gypsum wallboard ceiling material. The foam plastic is applied to (a) both sides of the trusses across the entire width of the ceiling assembly at all the ceiling board joints, (b) to opposite sides of the bottom chord along each half of the truss in the field of the ceiling boards, (c) to the entire length of the inside face of the end trusses and (d) along the ceiling peak. Ceiling board is secured to the top plates with 1 in. crown, leg 15/16 in. longer than nominal panel thickness, No. 16 ga. staples at a maximum of 4 in. o.c. The minimum in-place finished foam fillet height and width shall not be less than 1 in. and 1-5/8 in., respectively, at any location. The minimum height of the bottom chord of the trusses shall not be less than 1 in. The nominal 1 x 3 in. edge rail and nominal 1 x 4 in. top plate are spliced together with a minimum of 14 in. blocks of the same material, glued together with Universal 5009 PVA adhesive and fastened together with six 1 in. crown, 1-1/4 in. leg, No. 16 ga. staples, each side of joint. PEI Report #90-838.\*\*

Ultimate Shear Resistance: 376 lb./lin. ft.

Ceiling Diaphragm Width: 11 ft. 8.5 in.

Ceiling Diaphragm Span Between Shear Walls: 44 ft.

**Ceiling Application  
VC-002 and VC-2002**  
*(Staples)*

5/16 in. SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR) or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards fastened to vaulted trusses spaced 24 in.\* o.c. using No. 16 ga. staples (1 in. crown and legs 15/16 in. longer than nominal panel thickness) spaced 4 in. o.c. along the perimeter of each board and 16 in. o.c. in the field of the board with the crown parallel to the panel joints. The nominal 1 x 3 in. edge rail and nominal 1 x 4 in. top plate are spliced together with a minimum 2 x 5 in., 20 ga. connector plates. PEI Report #91-1136.\*\*

Ultimate Shear Resistance: 365 lb./lin. ft.

Ceiling Diaphragm Width: 13 ft. 8 in.

Ceiling Diaphragm Span Between Shear Walls: 44 ft.

**Section II  
Wall  
Applications**

**Wall Application W-103**  
*(One side vertically applied;  
minimum 2 x 3 in. framing  
members 16 in o.c. with  
white glue and staples.)*

5/16 in. SHEETROCK MH Brand Gypsum Base Board or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards vertically applied to one side of nominal 2 x 3 in. wood studs 16 in. o.c. and adhered with Mortell Co. Type C-937 adhesive 3/8 in. bead on studs and plates, then stapled 6 in. o.c. around perimeter and 12 in. o.c. in the field with crown parallel to and 1/2 in. from edges. Minimum staple size is 3/16 in. crown, 5/8 in. leg, 0.022 in. thick and 0.030 in. wide steel wire. UL File MH9733.

Ultimate Shear Resistance: 619 lb./lin. ft.

**Wall Application W-105**  
*(One side vertically applied;  
minimum 2 x 3 in. framing  
members 16 in o.c. with  
white glue and staples.)*

5/16 in. SHEETROCK MH Brand Gypsum Base Board or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards vertically applied to one side of nominal 2 x 3 in. wood studs 16 in. o.c. and adhered with Universal No. 5009 adhesive 3/8 in. bead on studs and plates, then stapled 6 in. o.c. around perimeter and 12 in. o.c. in the field with crown parallel to and 1/4 in. from edges. Minimum staple size is 1/4 in. crown, 3/4 in. leg, 0.030 in. thick and 0.045 in. wide steel wire. UL File MH9733.

Ultimate Shear Resistance: 614 lb./lin. ft.

**Wall Application W-106**  
*(One side vertically applied;  
minimum 1 x 3 in. plates and  
2 x 3 in. framing members  
16 in. o.c. with white glue  
and staples.)*

5/16 in. SHEETROCK MH Brand Gypsum Base Board or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards vertically applied to one side of nominal 2 x 3 in. wood studs 16 in. o.c. and nominal 1 x 3 in. top and bottom plates, and adhered with Mortell Co. Type C-937 adhesive 3/8 in. bead on studs and plates, then stapled 6 in. o.c. around perimeter and 12 in. o.c. in the field. Minimum staple size is 1/4 in. crown, 3/4 in. leg, 0.030 in. thick and 0.045 in. wide steel wire. UL File MH9733.

Ultimate Shear Resistance: 412 lb./lin. ft.



# Shear Resistance Classifications for SHEETROCK MH Brand Gypsum Panels

<p><b>Wall Application W-107</b> <i>(One side vertically applied; minimum 1 x 3 in. plates and 2 x 3 in. framing members 16 in. o.c. with two-component polyurethane foam.)</i></p>	<p>5/16 in. SHEETROCK MH Brand Gypsum Base Board or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards vertically applied to one side of nominal 2 x 3 in. wood studs 16 in. o.c. and nominal 1 x 3 in. top and bottom plates using UL Classified Foamseal Inc. two-component polyurethane foam designated as FOAMSEAL F2100. The foam plastic is applied at the intersection formed by the sides of the wood framing members and the gypsum board wall material. The foam adhesive is applied to the gypsum board/wood frame intersection with fillets (a) continuous along the top and bottom plates, (b) both sides of the wood framing occurring at panel joints and (c) to one side of the intermediate wood framing. The minimum in-place finished foam fillet height and width shall be 1-1/4 in. and 1-3/4 in., respectively, at any location. UL File MH9733.</p> <p>Ultimate Shear Resistance: 704 lb./lin. ft.</p>
<p><b>Wall Application W-108</b> <i>(One side vertically applied; minimum 1 x 3 in. plates and 2 x 3 in. framing members 24 in. o.c. with white glue and staples.)</i></p>	<p>5/16 in. SHEETROCK MH Brand Gypsum Base Board or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards vertically applied to one side of nominal 2 x 3 in. wood studs 24 in. o.c. and nominal 1 x 3 in. top and bottom plates, adhered with Universal No. 5009 adhesive 3/8 in. bead on studs and plates, then stapled 6 in. o.c. around the perimeter and 12 in. o.c. in the field with the crown parallel to the edges. Minimum staple is size 3/16 in. crown, leg minimum 7/16 in. longer than nominal panel thickness, 0.025 in. thick steel wire. PEI Report #90-2276.**</p> <p>Ultimate Shear Resistance: 435 lb./lin. ft.</p>
<p><b>Wall Application W-201</b> <i>(Both sides vertically applied; minimum 1 x 3 in. framing members 16 in. o.c. with white glue and staples.)</i></p>	<p>5/16 in. SHEETROCK MH Brand Gypsum Base Board or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards vertically applied to both sides of 1 x 3 in. wood studs 16 in. o.c. and adhered with Mortell Co. Type C-937 adhesive 1/4 in. bead on studs and plates, then fastened with No. 16 ga. staples (3/16 in. crown and legs minimum 7/16 in. longer than nominal panel thickness) 6 in. o.c. around perimeter and 12 in. o.c. in the field with crown parallel to and not less than 1/4 in. from edges. UL File MH9733.</p> <p>Ultimate Shear Resistance: 810 lb./lin. ft.</p>
<p><b>Wall Application W-203</b> <i>(Both sides vertically applied; minimum 2 x 3 in. framing members 16 in. o.c. with white glue and staples.)</i></p>	<p>5/16 in. SHEETROCK MH Brand Gypsum Base Board or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards vertically applied to both sides of 2 x 3 in. wood studs 16 in. o.c. and adhered with Mortell Co. Type C-937 adhesive 3/8 in. bead on studs and plates, then stapled 6 in. o.c. around perimeter and 12 in. o.c. in the field with crown parallel to and 1/2 in. from edges. Minimum staple size is 3/16 in. crown, leg 5/16 in. longer than nominal panel thickness, 0.022 in. thick and 0.030 in. wide steel wire. UL File MH9733.</p> <p>Ultimate Shear Resistance: 880 lb./lin. ft.</p>
<p><b>Wall Application W-204</b> <i>(Both sides vertically applied; minimum 1 x 3 in. plates and 2 x 3 in. framing members 24 in. o.c. with white glue and staples.)</i></p>	<p>5/16 in. SHEETROCK MH Brand Gypsum Base Board or 3/8, 1/2, 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards vertically applied to both sides of nominal 2 x 3 in. wood studs 24 in. o.c. and nominal 1 x 3 in. top and bottom plates, adhered with Universal No. 5009 adhesive 3/8 in. bead on studs and plates, then stapled 6 in. o.c. around the perimeter and 12 in. o.c. in the field with the crown parallel to the edges. Minimum staple size is 3/16 in. crown, leg minimum 7/16 in. longer than nominal panel thickness, 0.025 in. thick steel wire. PEI Report #90-2292.**</p> <p>Ultimate Shear Resistance: 563 lb./lin. ft.</p>
<p><b>Wall Application W-2101</b> <i>(One side horizontally applied; minimum 1 x 3 in. plates and 2 x 3 in. framing members 16 in. o.c. with two-component polyurethane foam.)</i></p>	<p>1/2 or 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards horizontally applied to one side of nominal 2 x 3 in. wood studs 16 in. o.c. and nominal 1 x 3 in. top and bottom plates using UL Classified Foamseal Inc. two-component polyurethane foam designated as FOAMSEAL F2100. The foam plastic is applied at the intersection formed by the sides of the wood framing members and the gypsum board wall material. The foam adhesive is applied to the gypsum board/wood frame intersection with fillets (a) continuous along the top and bottom plates, (b) both sides of the wood framing at 4 ft. o.c. and (c) to one side of the intermediate wood framing. The minimum in-place finished foam fillet height and width shall be 1-1/4 in. and 1-3/4 in., respectively, at any location. UL File MH9733.</p> <p>Ultimate Shear Resistance: 804 lb./lin. ft.</p>
<p><b>Wall Application W-2102</b> <i>(One side horizontally applied; minimum 2 x 4 in. framing members 16 in. o.c. with construction adhesive and nails.)</i></p>	<p>1/2 or 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards horizontally applied to one side of nominal 2 x 4 in. wood studs 16 in. o.c. and adhered with DAP 2000 construction adhesive 3/8 in. bead on studs and plates, then nailed 8 in. o.c. to all framing members. Minimum ITW Paslode nail is 1-1/2 in. long, 0.122 in. diameter. PEI Report #90-1964.**</p> <p>Ultimate Shear Resistance: 413 lb./lin. ft.</p>

**Wall Application W-2201**  
(Both sides horizontally applied;  
minimum 2 x 4 in. framing  
members 16 in. o.c. with con-  
struction adhesive and nails.)

1/2 or 5/8 in. SHEETROCK MH Brand Gypsum Panels or Ceiling Boards horizontally applied to both sides of nominal 2 x 4 in. wood studs 16 in. o.c. and adhered with DAP 2000 construction adhesive 3/8 in. bead on studs and plates, then nailed 8 in. o.c. to all framing members. Minimum ITW Paslode nail is 1-1/2 in. long, 0.122 in. diameter. PEI Report #90-2218.\*\*

Ultimate Shear Resistance: 704 lb./lin. ft.

\*Although shear tests were performed with trusses spaced at 24 in. o.c., United States Gypsum Company recommends a maximum truss spacing of 16 in. o.c. to minimize occurrences of excessive sag when using SHEETROCK MH Brand Predecorated Ceiling Board (LUNAR). For ceiling systems that will be finished in the plant (tape and texture), SHEETROCK MH Brand Gypsum Ceiling Board (ULTRA-BASE) is recommended for parallel attachment to trusses spaced up to 24 in. o.c.

\*\*Shear tests performed at Progressive Engineering, Inc. Contact your United States Gypsum Company representative for test report.

**Note:** In all tests, except where listed, panels were applied parallel to framing. "C" application codes indicate flat ceiling construction; "VC" application codes indicate vaulted ceiling construction.

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**Note:**

Products described here may not be available in all geographic markets. Consult your U.S. Gypsum Company sales office or representative for information.

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**SAFETY FIRST!**

Follow good safety and industrial hygiene practices during handling and installing all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.