



ICC Pei LLC® is an accredited ISO Standard 17065 Product Certifier, accredited by the IAS. This **Product Evaluation Report** represents a product that ICC Pei has Evaluated. This product has a Product Evaluation Service Agreement & Follow-up Inspection Service Agreement. This **Product Evaluation Report** in no way implies warranty for this product or relieves **United States Gypsum Company** of their liabilities for this product. This **PER** is an official document if it is within one year of the Initial Approval or Re-approved date.

Initial Approval

November, 2011

Re-Approved

February, 2021

See all Evaluation Reports at: www.p-e-i.com

Report Owner

United States Gypsum Company

550 West Adams Street
Chicago, IL 60661

Approved Manufacturing Locations

USG Plant #850 100 DJ Nootens Dr. Bridgeport, AL 35740	USG Plant #301 10 W. Evan Hewes Hwy. El Centro, CA 92243	USG Plant #240 29073 Dike Road Rainier, OR 97045
USG Plant #360 End of S.R. 650 Shoals, IN 47581	USG Plant #861 1 USG Road Sweetwater, TX 79556	

Product

SHEETROCK® Brand MH Gypsum Base Board

SHEETROCK® Brand MH UltraLight Ceiling Panels ULTRA-BASE™

Evaluation Report Information

USG Support: 800.USG4YOU

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General Details

USG SHEETROCK® Brand MH Gypsum Panels are specially designed for the Manufactured Housing and Modular Housing industries meeting the needs of time sensitive construction and structural integrity. These panels are manufactured at the locations shown above. Each location has an approved Q.C. Manual to manufacture these products, a Product Evaluation Service Agreement and a Follow-up Inspection Service Agreement with with **ICC Pei LLC** (formerly Pei ES)

Product Description

USG SHEETROCK® Brand MH Gypsum Base Board is manufactured in thickness of 5/16-in, 3/8-in, 1/2-in and 5/8-in. The board is manufactured at 48-in wide and is available from 7-ft to 14-ft in length. All board thicknesses have square edges. The board is encased in natural finish paper on the face side and a liner paper on the backside. **SHEETROCK® Brand MH Gypsum Base Board** is designed for parallel application to wood framing for wall and ceiling applications. The board may be fastened with a two-part polyurethane adhesive, a one-part polyurethane adhesive, PVA adhesive, mechanical fasteners or a combination of adhesive and mechanical fasteners.

USG SHEETROCK® Brand MH UltraLight Ceiling Panels ULTRA-BASE™ are a lightweight gypsum panel, with a re-engineered composite design for the Manufactured Housing and Modular Housing Industries and can also be used in Conventional Construction. The panel is manufactured 1/2-in thick and at 48-in and 54-in wide. The panel is available from 7-ft to 16-ft in length. The panel is available with tapered, square and taper/square edges. All ULTRA-BASE™ panels have a sag resistant core with a natural finish paper on the face side and a liner paper on the backside. A higher strength to weight ratio makes this product ideal for ceiling application. The ULTRA-BASE™ panel is designed for parallel or perpendicular application to wood framing spaced up to 24-in o.c. in wall and ceiling applications. These panel may be fastened with a two-part polyurethane adhesive, a one-part polyurethane adhesive, PVA adhesive, mechanical fasteners or a combination of adhesive and mechanical fasteners.

Compliance

A. General

All products meet or exceed the requirements of ASTM C1396 Standard Specification for Gypsum Board. 5/16-in Base Board may exceed thickness specification per Section 5.2.1.

SHEETROCK® Brand MH UltraLight Ceiling Panels ULTRA-BASE™, as covered by **ICC-ES ESR-3365**, can be installed parallel to wood framing spaced up to 24-in o.c. in ceiling applications and meets or exceeds the requirements of the 2012, 2015, 2018 & 2021 International Building Code® (IBC) / 2012, 2015, 2018 & 2021 International Residential Code® (IRC) for ceiling board.

B. Fire-Resistant-Rated Assemblies

See UL Fire Resistance Directory for UL approved fire rated assemblies.

C. Fire Reactance

Combustibility - All products have a non-combustible core when tested in accordance with ASTM E 136, as defined in 2012, 2015 & 2018 IBC Section 703.5, Section 703.3 for the 2021 IBC.

Surface Burning Characteristics - All products have a Flame Spread 15 / Smoke Development 0 when tested in accordance with ASTM E 84 (Class A as defined in 2012, 2015, 2018 & 2021 IBC Section 803.1.1).

D. Ceiling, Diaphragm, & Shearwall Rated Capacity

See design load Table 1 through Table 4 of this **Product Evaluation Report (PER)** for tested wall and ceiling assembly values or contact **USG** for a copy of third party test reports.

General Product Use

1. These products shall be installed in accordance with ASTM C 840 Standard Specification for Application and Finish of Gypsum Board, The **USG** Manufacturing Housing Handbook, Second Edition, and the requirements of **USG** Product Data.
2. **USG SHEETROCK® Brand MH Gypsum Panels** are approved for interior use when applied parallel or perpendicular to framing spaced at a maximum of 16-in o.c. for 3/8-in thick panels and up to 24-in o.c. for 1/2-in and 5/8-in thick panels. The 5/16-in thick gypsum panels are limited to HUD applications of specific assemblies qualified by an Accredited Third Party Test Report.
3. **USG SHEETROCK® Brand MH Gypsum Panels** are not approved for moist or wet areas such as shower backer board.
4. Where a vapor barrier is required, no vapor retarder shall be applied between the Gypsum Board and a Two-Part Polyurethane Adhesive.
5. Fasteners shall be driven so the fastener heads are slightly below the Gypsum Panel surface without breaking the face paper.
6. Use of **USG SHEETROCK® Brand MH Gypsum Panels** in Fire-Resistance or Fire-Rated assemblies is outside of the scope of this **Product Evaluation Report**.
7. Use of **USG SHEETROCK® Brand MH Gypsum Panels** used in Seismic design is outside of the scope of this evaluation report.
8. These products must be stored flat, in a dry environment and shall not be exposed to excessive or continuous amounts of moisture.
9. Two-Part Polyurethane adhesives shall be used to attach **SHEETROCK®** Gypsum to wood framing. The two-part polyurethane adhesives shall have a current **Product Evaluation Report**. The application of the two-part polyurethane adhesive shall follow the approved application instruction from the adhesive manufacturer and as described in the adhesive **Product Evaluation Report**. See the following Design load charts for the approved two-part polyurethane adhesives.

Tested to

- ASTM C1396/1396 M-06a Standard Specification for Gypsum Board
- ASTM E 72 - 13a Standard Test Methods of Conducting Strength Tests of Panels for Building Construction
- ASTM E 84-11 Standard Test Method for Surface Burning Characteristics of Building Materials
- ASTM E 136 - 11 Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C
- HUD CFR3280.401(b) Ultimate Load Test
- ICC-ES AC417 Section 4.1

Table 1 - Roof & Ceiling Diaphragm Design Loads for SHEETROCK® Brand MH Gypsum Base Board and UltraLight Ceiling Panels ULTRA-BASE™

Adhesive	Flat or Cathedral	Width and Maximum Span	Diaphragm Design Value (plf)	Test Report No.
AlphaSeal 5200	Both	11'-9" to 15'-6" x 48 ft.	203 plf	2012-1569 J*
FSI FoamNail	Both	10'-0" to 15'-6" x 52 ft.	192 plf	2012-1569 E**
ITW TACC F-2100	Both	11'-9" to 15'-6" x 48 ft.	180 plf	2012-1569 I
DOW MB 3099	Both	11'-8" to 15'-6" x 52 ft.	202 plf	2012-1569 G***

Note: The Design Load Value has already considered a 2.5 safety Factor.

*Addendum - Project 1998-1028

**Addendum - Project 1999-1348

***Addendum - Project 2001-1505

Table 2 - Ceiling Dead Load Designs for SHEETROCK® Brand MH UltraLight Ceiling Panels ULTRA-BASE™

Gypsum Orientation	Truss Spacing	Adhesive	Design Load	Test Report No.
Parallel to truss	24" o.c.	AlphaSeal 5200	16.5 psf	2012-1393 F
Parallel to truss	24" o.c.	Dow MB 3099	22.8 psf	2012-1569 Q
Parallel to truss	24" o.c.	FSI FoamNail	17.2 psf	2012-1569 A
Parallel to truss	24" o.c.	ITW TACC F-2100	19.4 psf	2012-1393 G

Note: The Design Load Value has already considered a 2.5 safety Factor.

Table 3 - Wall Shear Designs for SHEETROCK® Brand MH Gypsum Base Board

Framing				Thickness / Orientation	Single/Double Sided	Adhesive	Ultimate Shear (plf)	Test Report No.
Top Plate	Bott. Plate	Studs	Stud Spacing					
1x3	1x3	2x3	16" o.c.	5/16" / Vertical	Single	Voramers MB 3099	505.7	2004-0924B
					Single	ME 3805	574.3	2004-0924D
					Single	ME 3513	624.6	2008-1110B
					Single	FoamNail	602.5	1999-2462C
					Single	FSI One-Part	677.6	2001-1215A
					Single	F2100	584.5	1992-0598A
					Single	F6400 LVR	601.5	1998-2744B
					Single	JM-40	493.7	1996-1796A
					Single	Pemco 5100	708.5	1995-0454
			24" o.c.	5/16" / Vertical	Single	F-2100	482.3	1996-1420B
					Single	F6400 LVR	407.0	1997-1388A
					Double	ME 3513	972.1	2008-1110D
			16" o.c.	5/16" Vertical	Double	Macroplast UR	1110.7	NTA200103-2
					Double	JM-40	870.5	1996-1796B
					Double	P3100&3200	881.9	NTA200004-1
					Double	F6400 LVR	1027.8	1998-2308B
					Double	F6400 LVR	697.3	1997-1388D
					Double	ME 3513 1-part	883.0	2012-1483 A
16" o.c.	1/2" Horizontal	Single	FoamNail	682.0	1999-2462A			
		Single	FSI 1-Part	644.8	2001-1542			
		Single	Voramers MB 3099	649.6	2008-1260			
		Single	F-2100	688.7	1992-0598C			
2x3	1x3	2x3	16" o.c.	5/16" / Vertical	Single	Gun-N-Go	468.5	1996-1796C
					Single	Pemco 5100	647.9	1994-1240
					Double	Gun-N-Go	734.5	1996-1796D
2x3	2x3	2x3	16" o.c.	5/16" / Vertical	Single	Gun-N-Go	700.5	1996-1796E
					Single	FoamNail	811.0	1999-2792
					Double	Gun-N-Go	995.0	1996-1796F
					Single	FoamNail	818.7	1999-2462F

Note: Ultimate load does not include any required safety factors

Table 4 - Wall Shear Designs for SHEETROCK® Brand Ultralight Ceiling Panels ULTRA-BASE™

Framing				Thickness / Orientation	Single/Double Sided	Adhesive	Ultimate Shear (plf)	Test Report No.					
Top Plate	Bott. Plate	Studs	Stud Spacing										
1x3	1x3	2x3	16" o.c.	1/2" Vertical	Single	Foamseal F 6400 LVR	448.0	2012-1393 A					
					Single	DOW ME 3513 1-part	529.0	2014-1223 A					
					Double	DOW ME 3513 1-part	885.0	2014-1223 B					
			16" o.c.	1/2" Horizontal	Single	AlphaSeal 5200 2-part	760.0	2012-1569 O					
					Single	FSI FoamNail 1-part	671.0	2012-1569 E					
					Single	FSI FoamNail 2-Part	517.0	2012-1569 B					
					Single	DOW ME 3513 1-part	700.0	2012-1569 G					
					Single	DOW Voramers MB 3099	824.0	2012-1569 U					
					Single	Foamseal F6400 LVR	621.0	2012-1569 D					
					Single	Alpha Systems P5100 1-Part	736.0	2012-1569 P					
					Single	Alpha 3100 PVA	404.0	2012-1569 AD					
					Single	Foamseal F2100	508.0	2012-1569 K					
					Double	DOW ME 3513 1-part	950.0	2012-1569 AA					
					Double	Alpha Systems P5100 1-Part	1131.0	2012-1569 AB					
					Double	Foamseal F6400 LVR	823.0	2012-1569 AC					
					Double	FSI FoamNail 1-Part	1082.0	2012-1569 S					
					Single	Foamseal F6400 LVR	604.0	2012-1393 D					
					2x3	2x3	2x3	16" o.c.	1/2" Vertical	Single	Alpha Systems P5100 1-Part	627.0	2013-0585 C
Double	Alpha Systems P5100 1-Part	927.0	2013-0585 D										
Single	FSI FoamNail 1-Part	687.0	2012-1569 J										
16" o.c.	1/2" Horizontal	Single	Alpha Systems P5100 1-Part	658.0				2012-1569 H					
		Single	DOW ME 3513 1-part	786.0				2012-1569 W					
		Single	Foamseal F6400 LVR	675.0				2012-1393 C					
		Single	Foamseal F2100	576.0				2012-1569 L					
		Single	Alpha 5200 2-part	641.0				2012-1569 N					
		Single	Alpha 3100 PVA	479.0				2012-1569 X					
		Single	DOW Voramers MB 3099	798.0				2012-1569 V					
		Single	FSI FoamNail 2-Part	622.0				2012-1569 C					
		Double	DOW ME 3513 1-part	1125.0				2012-1569 R					
		Double	FSI FoamNail 1-Part	1297.0				2012-1569 AE					
		Double	Alpha Systems P5100 1-Part	1159.0				2012-1569 Z					
		Double	Foamseal F6400 LVR	881.0				2012-1569 T					
		2x4	2x4	2x4				16" o.c.	1/2" Horizontal	Single	Alpha 3100 PVA	632.0	2012-1569 Y
										Double	Alpha 3100 PVA	981.0	2012-1569 AF

Note: Ultimate load does not include any required safety factors

Product Documentation

A Product Evaluation Service Agreement between *Pei Evaluation Service*[®] and **USG**.
 A Follow-up Inspection Service Agreement between *Progressive Engineering Inc.* and **USG**.
 Quality Control Manual - Dated: 6/5/2020
 SDS sheet for **SHEETROCK[®] Brand MH Gypsum Base Board** - Dated: 3/24/2017
 SDS sheet for **SHEETROCK[®] Brand MH UltraLight Ceiling Panels ULTRA-BASE[™]** - Dated: 3/24/2017
 Product Data Sheet for **SHEETROCK[®] Brand MH Gypsum Base Board**
 Product Data Sheet for **SHEETROCK[®] Brand MH UltraLight Ceiling Panel ULTRA-BASE[™]**
USG Manufactured Housing Hand Book, Second Edition
Pei test report No. 2011-1269 - ASTM C1396/C1396M-06a using 1/2" **USG SHEETROCK[®] Brand MH Gypsum Panels** - Dated: 10/3/2011
 Intertek Test Report No. 3146323SAT-0001 - Dated March 19, 2008
 UL Test Report No. USG 11CA41151 - ASTM E136-11 and ANSI/UL723 - Dated: 9/20/2011
For Test Reports not listed refer to Table 1 through Table 4 of this PER.

Product Labeling

All **USG SHEETROCK[®] Brand MH Gypsum Panels** that are covered by this **PER** must have at least the following information;

1. Board Brand and Type
2. **USG** Name and Address
3. Date of Manufacture
4. Labeling with this **PER** Number and *Pei ES* Logo and/or ICC *Pei* logo.

This information can be provided in one or all of the following ways;

1. Each board can have this information applied to the back side
2. Skid Card attached to a board unit
3. On the end tape of each bundle - two panels per bundle

Acceptable Evaluation Marks

