PLAINTIFF'S EXHIBIT

GP-542

GYPSUM WALLBOARD

FIRESTOP GYPSUM WALLBOARD

FIREPROOF GYPSUM SHEATHING

BESTWALL HUMMER SYSTEMS

JOINT SYSTEMS

BESTWALL GYPSUM WALLBOARD PRODUCTS

SGP 0002174

BESTWALL GYPSUM WALLBOARD

THE ORIGINAL AND ONLY GLASS FIBER REINFORCED GYPSUM WALLBOARD

Description: Bestwall Gypsum Wallboard consists of a glass fiber reinforced core of gypsum rock enclosed between two layers of tough paper. The durable cream face paper is folded around the long edges to reinforce and protect the core. The ends are square cut and smooth finished. A strong gray pape is on the back side.

Function and Utility: Fireproof—The solid core of gypsum wallboard is incombustible. Gypsum will not burn and will not transfer heat in excess of 212° F. until all its water of crystallization has been driven off in the form of steam.

Strength—Readily resists flexural stresses and will not crack or sag when applied to ceilings in the specified manner.

Joint Treatment—Wallboard is finished with tapered edges to accommodate the Bestwall Joint Systems or square edges for exposed joints.

Fast Decoration—Wallboard, basically a "dry" material, allows painting or other decoration shortly after application of Joint Treatment.

Economy—Large, lightweight panels go up fast. They may be "scored and snapped" or sawed to size.

Drywall—Plant fabricated gypsum wallboard eliminates extreme moisture in wall constructions.

Limitations of Use: 1. Gypsum Wallboard shall not be used where it will be exposed to water or excessive moisture.

2. ¼" Bestwall Gypsum Wallboard should be applied only to existing surfaces or used in temporary or display work. Surfaces should be sound. When necessary, furring strips should not be spaced over 16" o.c.

⅜" Bestwall Gypsum Wallboard should not be applied to nailing members spaced over 16" o.c. Horizontal application must be used on ceilings.

½" or ⅝" Bestwall Gypsum Wallboard should not be used on nailing members over 24" o.c. When applied to ceilings with the nailing members exceeding 16" o.c. the wallboard must be applied with the paper bound edges at right angles to nailing members.

3. All furring used in application of gypsum wallboard shall have a minimum cross section of 2" x 2" (nominal), with same space limitations as above.

BESTWALL FIREPROOF GYPSUM WALLBOARD

Regular Gypsum Wallboard—available with tapered or square edges faced with a strong, cream faced paper which will take any type of decorative treatment.

½" and ⅝" Tapered Edge wallboard are recommended for single layer application in new construction. Should be used with Bestwall Joint System for smooth, seamless surfaces. Square Edge is recommended for use where exposed joints are acceptable. Greater thickness provides increased resistance to fire exposure and sound transmission.

⅜" Gypsum Wallboard is used primarily in repair and remodeling work. Light weight permits easy handling and application. Also recommended for use in double layer laminated gypsum wallboard construction.

¼" Gypsum Wallboard is a lightweight economical gypsum wallboard for application directly over existing walls and ceilings and for use on curved surfaces and in display work.

Firestop Bestwall—first drywall material to provide up to one hour fire resistant load bearing walls and ceilings with one layer application on both combustible and incombustible framing. Firestop Bestwall in two layer application was first to provide two-hour fire resistant load bearing walls. Made from incombustible gypsum rock it combines all the advantages of regular gypsum wallboard with increased fire protection—the result of an exclusive Bestwall Gypsum Company manufacturing process. Incombustible glass fibers and unexpanded vermiculite are added to the gypsum core. The glass fibers remain strong under extreme heat and help keep the gypsum core intact even after the chemically combined water has been released. The unexpanded vermiculite expands under heat, thereby balancing the shrinkage of the gypsum core after the loss of water. The stabilized gypsum core, increasing insulation value at extreme high temperatures, provides up to three times greater fire resistance than conventional gypsum wallboard.

Building Code requirements may be met with Firestop for 45 minute to 3 hour fire-resistant interior wall and ceiling construction in buildings of all types from highly incombustible to wood frame; and for various occupancies of residential, public and commercial character.

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Crack resistance: resists cracks due to framing movements, vibrations and setting; unaffected by humidity or extremes in temperatures.

Sound Transmission Rating: results of sound transmission test by Riverbank Laboratories on a standard wood stud partition faced each side with single layer of ⅝" Firestop Bestwall Gypsum Wallboard show a 39 decibel noise reduction value with density of 7.2 pounds per square foot.

Strength: Firestop resists crosswise stresses. Firestop Bestwall ⅜" board has flexural strength of 225 to 275 lbs. as compared to Federal Specifications minimum requirement of 105 lbs. for ½ inch regular gypsum wallboard. Adaptable to any architectural plan.

Bestwall Wood Grained Gypsum Wallboard—regular gypsum wallboard prefinished with reproductions of true-wood patterns. These photographic reproductions are printed on special paper, finished with a durable transparent coating and cemented to the face of regular gypsum wallboard. Combines all the advantages of regular gypsum wallboard with the economy of natural-looking wood grained predecorated panels.

Available in five finishes: Driftwood Mahogany, Knotty Pine, Autumn Mahogany, Figured Aspen and Fawn Mahogany. The Aspen and the three Mahogany boards are supplied with beveled edge. Knotty Pine has square edge. Color matched nails are recommended.

Bestwall Insulating Gypsum Wallboard—regular gypsum wallboard with aluminum foil laminated to the back surface. In a single application it provides the advantages of regular gypsum wallboard, an effective vapor barrier and insulating qualities. The foil stops vapor from entering the exterior wall construction, thereby reducing condensation in stud spaces. Aluminum foil, according to U.S. Bureau of Standards tests, reflects 90% of radiant heat.

Bestwall Gypsum Sheathing—manufactured with precision-cut tongue and groove edges to provide a structurally strong and dimensionally stable wall. Specially treated core as well as surface papers combined with V joints eliminate need for an underlayer of treated building paper (except where required by local building codes). The core consists of incombustible, processed gypsum rock combined with an emulsion to provide high resistance to water. Officially rated for one full hour fire-resistance from both sides in combination with gypsum wallboard applied as specified over wood studs and any exterior finish (wood siding, stucco, brick veneer, etc.)

TECHNICAL DATA—BESTWALL GYPSUM WALLBOARD CONSTRUCTION

CONSTRUCTION		WALL SURFACE		FIRE RATING	WEIGHT SQ. FT.	NRC (AVERAGE) DECIBELS*
Partitions:	Wood Studs 16" on center unless noted otherwise. Load bearing and non load bearing unless noted.	Surfaced both sides with	⅜" Bestwall	25 Minutes	—	—
			½" Bestwall	40 Minutes	5.9	35
			½" Bestwall with Mineral Wool in stud space.	1 Hour	—	—
			½" Firestop Bestwall	45 Minutes	—	—
			⅝" Firestop Bestwall	1 Hour	7.2	39
			2 layers ⅜" Bestwall	1 Hour	8.2	38
			2 layers ½" Bestwall	1½ Hours	—	—
			2 layers ⅝" Firestop Bestwall	2 Hours	12.9	35
Partitions.	Steel Studs 24" on center (Nailable) load bearing	Surfaced both sides with	⅝" Firestop Bestwall	1 Hour	6.5	—
Partitions:	Gypsum Studs Non Load Bearing	Partitions 2¼" Thick	2 layers ⅝" Firestop Bestwall separated by 1" Gypsum Studs.	1 Hour	6.7	30
		4" Thick	2 layers ⅝" Firestop Bestwall on each side of 1" Gypsum Studs	2 Hours	13.4	37
		5" Thick	2 layers ⅝" Firestop Bestwall on each side of staggered 1" Gypsum Studs	3 Hours	13.4	40
Ceilings:	Wood Joists 16" on center unless noted otherwise. Finished wood floor on rough wood subfloor.	Ceiling	⅜" Bestwall	15 Minutes	—	—
			½" Bestwall	25 Minutes	11.4	—
			⅝" Firestop Bestwall	30 Minutes	—	—
			½" Firestop Bestwall	45 Minutes	—	—
			⅝" Firestop Bestwall	1 Hour	12.0	—
			2 layers ⅜" Bestwall	30 Minutes	12.4	32
			2 layers ½" Bestwall	1 Hour	—	—
Ceilings:	Steel Joists 24" on center unless noted otherwise. 2" Cement floor slab cross furring 16" center.	Ceiling	⅝" Firestop Bestwall	1 Hour	34.2	44
			⅝" Firestop Backer	1 Hour	34.1	—
			2 layers ⅝" Firestop Bestwall	1½ Hours	36.8	—
Steel Columns:		Board tied and Finished	2 layers ½" Bestwall	1 Hour		
			3 layers ½" Bestwall	1½ Hours		
			4 layers ½" Bestwall	2½ Hours		

Fire Hazard Classification — Official Underwriters Tests ½" & ⅝" Firestop (Listed) 10-15 — ⅜" [illegible] and [illegible] Bestwall 10-15

NOTE: This table is a summary only based on tests at Underwriters Laboratories, National Bureau of Standards and/or Ohio State University sponsored by the Bestwall Gypsum Company, the Gypsum Association and/or others. The fire rating, weight and sound characteristics are based on a combination of specific details as covered in official publications of Underwriters Laboratories, the National Bureau of Standards, Ohio State University and/or the Bestwall Gypsum Company.

*Inconsistencies Due to Reports covering 15 years and work of different laboratories.

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BESTWALL HUMMER SYSTEMS

ARCHITECTURAL SPECIFICATION—SYSTEM A

Materials: All gypsum wallboard and joint system materials required for installation of Bestwall Hummer System "A" shall be as manufactured by Bestwall Gypsum Co.

1. 3/8" backer board, 4' wide (or 2' wide) gray face and back paper.
2. 3/8" Tapered Edge Bestwall Gypsum Wallboard.
3. 3/8" Tapered Edge Bestwall Gypsum Wallboard with Center Taper parallel to long edges of board.
4. 1 5/8" GWB-54 gypsum wallboard nails or 1 5/8" Bestwall Hummer annular ring steel wire nail, 13 gauge, 15/64" flat head medium diamond point nails.
5. 1 1/4", 4-d, 13 gauge, 1/4" flat head blue diamond point nail.
6. 3/4", No. 14 Phillips flat head Type A (Tapping) screw, (American Screw Co., of Chicago, Ill.,) or equal.
7. Bestwall Joint System materials, including Laminating Compound, Cement, Bedding Compound, Topping Compound, and Tape.

Construction: a. Ceiling and Sidewalls (first layer)—For ceilings and sidewalls install first layer of 3/8" Bestwall Gypsum Backer board at right angles to framing members. Edges shall center on studs and joists, using 1 1/4" long blued nails (or staples) at 5" to 7" o.c. on ceilings and 6" to 8" o.c. on walls. DO NOT DIMPLE THE BOARD.

b. Ceiling (face layer)—Apply Bestwall Laminating Compound on back of face layer board or to Backer Board and install the 3/8" Bestwall Tapered Edge Board with center taper at right angles to joists. Neither end joints nor edge joint in the face layer shall fall over the joints in the back layer. No edge joint or end joint in face layer shall fall over a joist, but be so installed as to make end joints fall midway between joists. Nail face board at edges and center taper and before laminating compound has set, drive 3/4" No. 14 flat head type "A" screws between joists spaces in center taper and in tapered edge joint formed by two adjacent boards. Space screws in end joints 12" o.c.

c. Sidewalls (face layer)—Apply similar to ceiling face boards: Nail the top Regular 3/8" Tapered Edge board in place, with 1 5/8", 5 d annular ring nails 1/2" from ceiling line so as to fall under joint treatment. Press board against back layer and nail 3/8" from bottom edge at each stud. Install bottom face board similarly to the top board with end joints staggered, if they occur. Vertical end joints to fall midway between studs. Before laminating compound has set drive 3/4" No. 14 Phillips flat head type "A" screws between stud spaces in the tapered edge joint formed by two adjacent boards. Install screws 12" o.c. at vertical joints.

Bestwall Laminating Compound: Must be mixed to a consistency so that combed ridges will not self level when the board is in a vertical position (use approx. 2 3/4 pounds per one gallon of water).

Joint Work: Apply Bestwall Bedding Compound or Bestwall Joint System Cement to the Taper Edge joints and screwheads. Shear off surplus, leaving no material on high edges. Allow 12 hours drying before taping, leaving a uniform depth of taper for uniform shrinkage of joint finishes over and under tapes.

Apply Bestwall Bedding Compound or Joint System Cement and embed tape leaving a uniform thickness of material under the tape.

When bedding compound or Joint System Cement has whitened (surface dry) cover taped joint with Bestwall Topping Compound. Shear off surplus leaving a uniform coverage over tape with edges well feathered.

The bedding compound or joint system cement under the tape and first coverage of tape with topping compound must be thoroughly dry before further treatment.

Cover joints a second time with topping compound. Shear off surplus leaving a smooth, well-feathered joint.

For best results and a more uniform suction, apply a skim coat of joint system cement or topping compound over the entire surface and shear off tight in lieu of a third application of topping compound to joints only.

Decorating: Decorating of finished walls is to be done by others. Where a skim coat has been used to finish the wallboard, a one-coat paint application may be satisfactory. For best results use a prime coat over wallboard before final decoration.

ARCHITECTURAL SPECIFICATION—SYSTEM B

Materials: All gypsum wallboard and joint system materials required for installation of Bestwall Hummer System "B" shall be as manufactured by Bestwall Gypsum Co.

1. 5/8" Firestop Bestwall Tapered Edge Gypsum Wallboard.
2. Gypsum Wallboard Studs, Factory laminated (or on job).
3. 1 1/4" and 1 1/2" No. 14 Phillips flat head wood screws (American Screw Company, Chicago, Ill.) or equal.
4. Nails, Rawl type drives, screws, etc. as shown in details.
5. Bestwall Joint System materials including Laminating Compound, Cement, Bedding Compound, Topping Compound, Tape, and Certex Texture.
6. Metal and/or wood, door frames, runners, trim, caps, etc. as per details.

Construction: a. General Preparation—Floor runners for partition work shall be laid out and fastened securely to the floor. Where partitions extend to ceiling, the ceiling runner shall be plumbed up over floor runner and fastened in place. Install 2" x 4" nailers between joists at 24" o.c. where partitions run parallel with joists. Where one piece door frames are used, they are to be set in place and braced.

b. Erecting First Side of Partition (Panels with Ribs Attached)—Apply Bestwall Laminating Compound with box type comb spreader to the overlapping edge or strip. Set panel in position on wood wedges and nail panel to the ceiling and floor runners with 1 5/8" Bestwall Hummer Annular ring nails spaced 5" to 7" o.c. Reinforce joint between panels by installing 1 1/2" long Phillips flat head wood screws in the taper, 3/4" from edge of board spacing screws 24" o.c.

c. Erecting Second Side of Partition (Panels with Ribs Attached)—Apply strips of Bestwall Laminating Compound to back of face board with box type comb spreader where board comes in contact with laminated ribs in place. Place face board on wood wedges and nail at top and bottom in the same manner as the first side. The edges in the second sheet shall be offset so that the vertical joints in the finished wall do not fall over the joint in opposite face board. After two of the second face panels are in place, reinforce the joints by installing 1 1/2" Phillips flat head wood screws in the joint, 1 ft. from ceiling or floor spacing screws 24" o.c.

d. Door Openings—Fill in rib space around door and other openings in the wall with a 3 1/2" rib covered on both sides with laminating compound. Drive wood clamps in place immediately, and allow at least 12 hours setting time. After clamps are removed, the door and jambs shall be set in openings and trimmed, and the base and ceiling molding nailed in place. 1" x 1" wood may be used for core space filler. 6-3/4" ribs shall be used for doors weighing 100 pounds or more.

e. Self-Furring Walls—To keep Gypsum board panels from contact with exterior masonry walls, nail no drip shims to panel ribs.

Electrical Work: Thin wall conduit can be installed after the first side of the partition is in place, and run in the rib space vertically and along the top and bottom of the panels in the space left by holding the rib strips back from panel ends. For rigid conduit requiring 1 1/4" space 2 strips 5/8" board should be used. This will result in a 2-1/2" thick wall. Runners, door frames, and trim should be specified accordingly. The opposite side of the panel is set in place after the conduit is installed.

Fire Rated Walls, 1, 2, and 3 Hours (Non-Load Bearing): The 2 1/4" wall described above with certain additional mechanical fastenings (closer spacing) is listed by Underwriters' Laboratories as 1 Hour Fire Resistive (see Bestwall detail plan sheet No. 5583—"Firestop Bestwall Gypsum Wallboard One Hour Non-Load Bearing Studless Wall").

Adding one additional layer of 5/8" board on each side of the partition with two runners and making the two sides independent results in a wall 4" thick which is listed by Underwriters' Laboratories as 2 Hour Fire Restistive (see detail plan sheet No. 5584—"Firestop Bestwall Gypsum—2 Hour Non Load Bearing Studless Wall").

Separating the two double layer faces by an additional rib making a wall 5" thick gives a wall section listed by Underwriters' Laboratories as 3 Hour Fire Resistive (see Bestwall detail plan sheet No. 5585—"Firestop Bestwall Gypsum 3 Hours Non-Load Bearing Studless Wall").

Joint Work: See System "A" specifications.

Decorating: See System "A" specifications.

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BESTWALL HUMMER SYSTEMS

ARCHITECTURAL SPECIFICATION*—SYSTEM C

Materials: All gypsum wallboard and laminating compound required for installation of Bestwall Hummer System "C" shall be as manufactured by Bestwall Gypsum Co.

1. 16" wide, rounded edge Bestwall Hummer "C" Panel, 8', 10', or 12' long; or 24" wide, beveled edge Bestwall Hummer "C" Panel, 8', 10', or 12' long.
2. ¾" x 1⅝" wood runner. (See note on rigid conduit in Electrical Section).
3. Nails, rawl drives, screws, etc., as shown.
4. 1½" No. 14 Phillips flat head wood screws (American Screw Company, Chicago, Ill.) or equal.
5. Bestwall Laminating Compound, non-setting mastic, and quick setting mastic.
6. Metal and/or wood, door frames, runners, cap and trim as per details.
7. Metal corner and casting sections as per details.

Construction: a. General Preparation—Floor runners for partition work shall be laid out and fastened securely to the floor. Where partitions extend to ceiling, the ceiling runner shall be plumbed up over floor runner and fastened in place. Install 2" x 4" nailers between joists at 24" o.c. where partitions run parallel with joists.

b. Erection of Panels—After floor and ceiling runners are installed including runners at intersecting walls, install 16" "C" panel (or 24") as outlined. Stagger joints in the partition to develop the tongue and groove feature. As each panel of the opposite face is set in place, run ribbons of Bestwall Laminating Compound, for permanent partition (non-setting mastic for movable partition) down the strips of ⅜" board on the back of the panel. Set them in place. Use punch with ¼" pin to countersink for heads of 1½" No. 14 Phillips head wood screws to be driven in the tongue of the previous panel set in place. Install 1½" No. 14 Phillips head wood screws approximately 24 inches o.c. The panels on the opposite side shall be held in place so that the screw can be drawn up tight without stripping.

c. Openings—After the panels are erected, the doors and jambs shall be set in the openings and trimmed and the base and ceiling molding nailed in place. Where an opening has been cut in the wall section leaving a hollow space at the opening, the cut pieces from erected panels, or wood 1⅝", shall be fitted, glued on the sides and inserted around the opening in order that have a solid gypsum rib core at least 3" wide at the edge of every opening to give rigidity and backing for the installation of the casing and trim.

d. Self-furring Walls—On existing smooth interior walls apply a coat of Bestwall Laminating Compound or non-setting mastic on panel ribs, press panel firmly against wall and hold permanently in place with Phillips head wood screws or nails at the top, bottom and middle of panel. For rough interior and exterior walls install "C" panel with "no drip" shims and filler strips as shown on details. Flat head nails shall be driven at top, bottom and middle through tongue and shim.

Metal Corners and Base—Note. Where local code requires a noncombustible partition, add the following:

All floor, ceiling and wall runners at intersecting walls shall be sheet metal of 24 gauge as per detail No. 1 on drawing No. 10. All cut ends of partitions shall be concealed with a metal corner closure or moulding. Metal door frames and base boards shall be used.

Electrical Work: Thin wall conduit can be installed after the first side of the partition is in place, and run in the rib space vertically and along the top and bottom of the panels in the space left by holding the rib strips back from panel ends. For rigid conduit requiring wider space a 2¼" x ⅜" strip may be used at each rib between panels to widen space to 1⅛. Runners, door frames, and trim should be specified accordingly. If necessary, the back panel may be gouged out for connectors at boxes. Do not cut paper between the two full ⅛" sheets of "C" panel. The opposite side of the panel is set in place after the conduit is installed.

Decorating: As there is no Joint System in the wall area, a one coat paint job may give a satisfactory job if a flat or semi gloss finish is used. Wood trim should have all nail holes puttied and primed before final coat of paint.

ARCHITECTURAL SPECIFICATION*—SYSTEM D

Materials: All gypsum wallboard and joint system materials required for installation of Bestwall Hummer System "D" shall be as manufactured by Bestwall Gypsum Co.

1. ⅜" by 8" and ⅜" by 4" strips of Bestwall Gypsum Wallboard.
2. ½" Tapered Edge Bestwall Gypsum Wallboard.
3. ½" Tapered Edge Bestwall Gypsum Wallboard with Center Taper parallel to long edges of board.
4. 1⅝" GWB-54 gypsum wallboard nails or 1⅝" Bestwall Hummer annular ring steel wire nail, 13 gauge, 15/64" flat head medium diamond point nails.
5. 1¼", 4-d, 13 gauge, ¼" flat head blue diamond point nail.
6. ¾", No. 14 Phillips flat head Type "A" (Tapping) screw, (American Screw Company of Chicago, Ill.) or equal.
7. Bestwall Joint System materials including Laminating Compound, Cement, Bedding Compound, Topping Compound and Tape.

Construction: a. Strips—⅜" gypsum board strips, 8" wide, shall be nailed on both the wall and ceiling framing. 4" strips may be used at ceiling angles and at the floor line on all walls. ⅜" gypsum board strips 8" wide by 8' long shall be spaced so that the long edges and center of face board center on those strips. Maximum center to center of the 8" strips shall be 24" o.c. ⅜" gypsum board strips 8" wide of sufficient length to span two joists or studs shall be installed between long strips and directly under end joints of face board in ceiling and on walls. Nail strips with two blued nails one inch from edge of strip at each joist and stud. DO NOT DIMPLE THE BOARD.

b. Ceiling (Face Layer) Before face board is installed, cut off all damaged edges and apply strips of Bestwall Laminating Compound to backside of face board or to strips on ceiling. Install ½" Bestwall Tapered Edge Board with a Center Taper at right angles to ceiling joists over stripping. No edge joint or end joint in the face layer shall fall over a stud or joist, but shall be so installed as to make end joints fall midway between studs or joists. After the board is in place, nailed in edge and center taper only, and before the laminating compound has set, drive ¾" No. 14 Phillips flat head Type "A" screws in the tapered edge joint formed by two adjacent boards and in the center taper. No screws are required in the center taper if joists are 16" or less o.c. Screws shall be installed at 12" o.c. at end joints falling between center of joists.

c. Sidewalls (Face Layer) Regular ½" Tapered Edge Board shall be applied horizontally over the walls. Bestwall Laminating Compound shall be applied in strips to the back of the face board or to the strips on wall. The top face board shall be nailed in place with 5-d, 1⅝" annular ring nails ½" from ceiling line so as to fall under joint treatment or proposed trim. Press board against strips and nail ⅜" from edge at each framing member. The bottom board shall be installed similarly to the top face board with end joints staggered, if they occur. Vertical end joints between face boards shall fall midway between studs. After the board is in place and before the Laminating Compound has set, drive ¾" No. 14 Phillips flat head Type "A" screws between stud spaces in the tapered edge joint formed by two adjacent boards. Screws shall also be installed 12" o.c. at vertical end joints.

Bestwall Laminating Compound: See System "A" specifications.

Joint Work: See System "A" specifications.

Decorating: See System "A" specifications.

*For more detailed specifications, write manufacturer's general office
Bestwall Gypsum Company
120 East Lancaster Avenue
Ardmore, Pennsylvania

SGP 0002178

BESTWALL



FIRESTOP BESTWALL

ORIGINAL ONE-HOUR FIRE RATED GYPSUM WALLBOARD

The original one-hour Fire-rated gypsum wallboard— Firestop Bestwall is recommended where extra fire resistance is required in residential, commercial and public buildings. ⅝" thickness provides one hour fire resistance in single layer application on both walls and ceilings over wood or steel. ½" thickness provides 45 minutes fire rating in single layer application when applied over wood framing, for both walls and ceilings.

The extra fire protection offered by Firestop Bestwall is built right into the core through the use of specific amounts of non-combustible glass fibers and unexpanded vermiculite.

⅝" Firestop Bestwall qualifies for code acceptance in all the constructions in the table below. Firestop Bestwall is listed by Underwriters' and carries the UL Label for 1, 2 and 3 hour Fire Resistance in various Designs and for Fire Hazard Classification of 10-15.

PARTITIONS—LOAD BEARING OR NON-LOAD BEARING

FRAMING	CONSTRUCTION	RATING	AUTHORITY	UL Design No.	ICBO Research Recommendation
Metal Studs 24" (Max.) O.C.	1 layer, ⅝" Firestop Bestwall both sides.	1 hour	Test by independent, nationally-known laboratory. Name on request.	11	1155.
2" x 4" Wood Studs 16" O.C.	2 layers, ⅝" Firestop Bestwall both sides	2 Hour	Test by independent, nationally-known laboratory. Name on request.	—	1000
	1 layer, ⅝" Firestop Bestwall both sides	1 Hour	Underwriters' Laboratories Retardant 2889 - 8/5/47	5	1145.
	1 Layer, ½" Firestop Bestwall both sides	45 Min.	Underwriters' Laboratories Retardant 2717 - 7/29/46	1	—

PARTITIONS—NON-LOAD BEARING

NONE	1 layer, ⅝" Firestop Bestwall both sides over 1" Gypsum Strips	1 Hour	Underwriters' Laboratories Retardant 2717 - 19 - 21 - 6/3/57	10	1144
NONE	2 layers, ⅝" Firestop Bestwall both sides over 1" Gypsum Strips	2 Hour and 3 Hour	Underwriters' Laboratories Retardant 2717-20-22-8/26/57	7 5	1263

FLOOR AND CEILING

12" Bar Joists 24" O.C. Covered with 2" concrete floor slab	1 layer, ⅝" Firestop Bestwall as ceiling surface through metal furring	1 Hour	Underwriters' Laboratories Retardant 2717-16-12/1/52	2	1155
12" Bar Joists 24" O.C. Covered with 2" concrete floor slab	2 layers, ⅝" Firestop Bestwall as ceiling surface through metal furring	1½ Hours	Underwriters' Laboratories Retardant 2717-23-12/1/59	3	
2" x 10" Wood Joists Covered with wood subfloooring building paper, wood finish flooring	1 layer, ⅝" Firestop Bestwall as ceiling surface	1 Hour	Underwriters' Laboratories Retardant 2717 7/12/51	1	1145
	1 layer, ½" Firestop Bestwall as ceiling surface	45 Min.	Underwriters' Laboratories Retardant 2717-6/27/50	1	—

PLUS a Flame Spread Rating of 10 15 for both ½" and ⅝" Firestop based on Official Underwriters' Tunnel Furnace Tests and listed by them for Fire Hazard Classification

YOU ARE PROTECTED AGAINST SUBSTITUTION of inferior material by Underwriters' Laboratories Label Service, as evidenced by the Underwriters' Laboratories Manifest which appears on the twin mounting tape binding each bundle of 2 pieces. And especially important to architects and building inspectors, the front of each sheet is marked with "Firestop Bestwall" so that it's easy to identify when in place.

Details of construction and information about sound transmission rating, flexural strength, backer for acoustical tile will be sent upon your request.

MANIFEST FOR ⅝" FIRESTOP BESTWALL

FIRE HAZARD CLASSIFICATION

Flame Spread	10 15
Fuel Contributed	5 15
Smoke Developed	0 15



FIRE RETARDANT CLASSIFICATION

SGP 0002179

BESTWALL GYPSUM WALLBOARD

SINGLE LAYER APPLICATION USING BESTWALL OVER WOOD FRAMING ON WALLS AND CEILINGS

Bestwall Regular Gypsum Wallboard: Where Bestwall is applied directly to wood framing members, ceilings are put up first, then walls. Board layout should be planned to minimize joints. Joints must always occur over a stud. Boards should be accurately cut to fit and joints loosely butted In wall construction, horizontal application is recommended where joints are to be concealed. Vertical application is recommended where joints are to be left exposed or finished with metal or wood trim. In ceiling application, the boards should always be applied at right angles to the nailing member. Nails should be spaced not to exceed 7" on ceilings and not to exceed 8" on walls.

Function and Utility:
1. Reduces necessary joint treatment footage.
2. Avoids need for headers.
3. Each board braces more framing members.
4. The fewer joints can be treated at convenient height for finishing.

Thickness: ¼", ⅜", ½", ⅝"
Width: 4'
Edges: Tapered or Square
Length: 6' to 16'

Firestop Bestwalls: ½" and ⅝" Firestop Bestwall combine all the advantages of regular gypsum wallboard with increased fire resistance—the result of a specially formulated core containing incombustible glass fibers and unexpanded vermiculite. A single layer of ½" Firestop on both sides of a load bearing wood stud wall or as the ceiling finish of a standard wood joist and floor construction provides a 45 minute fire rating. One layer of ⅝" Firestop over load bearing wood or metal studs, or used in a non-load bearing Bestwall Hummer System "B" construction provides one hour fire resistance. One hour fire rating is also provided by one layer of ⅝" Firestop as the ceiling finish beneath either a wood joist and floor construction or steel bar joist and cement floor construction.

Thickness: ½", ⅝"
Width: 4'
Edges: Tapered or Square
Length: 6' to 16'

Bestwall Wood Grained Gypsum Wallboard: In single layer application, Bestwall wallboards with square or beveled edges, such as Wood Grained Wallboard, present a more attractive appearance when applied vertically. Joints may be covered with wood trim or left exposed.

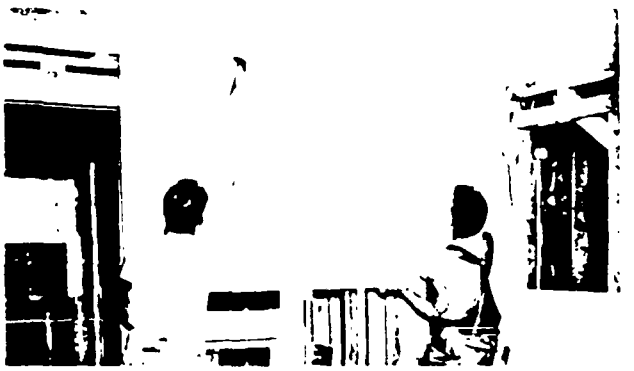
Decoration: Bestwall Wood Grained Gypsum Wallboard may be given a glossy finish by painting with a clear shellac or by varnishing and then waxing.
Thickness: ⅜" (½" on order)
Width: 4'
Edges: Beveled (Figured Aspen, Driftwood Mahogany, Autumn Mahogany and Fawn Mahogany)
Square (Knotty Pine)
Length: 8', 9', 10'

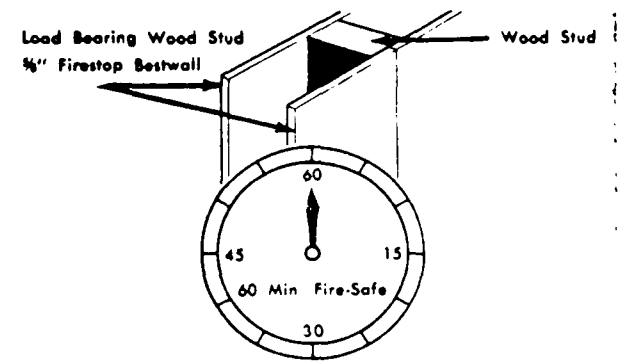
Bestwall Insulating Gypsum Wallboard: Bestwall Insulating Gypsum Wallboard is made by laminating bright aluminum foil to the back surface of regular gypsum wallboard.

Vapor Barrier—It serves as a vapor barrier for exterior walls and ceilings when applied with foil surface next to the studs in single layer application. Or as the base layer in a double layer system.

Insulation—To achieve insulation value, it must be installed with the foil side against the studs and facing a minimum air space of ¾"

Thickness: ⅜", ½", ⅝"
Width: 4'
Edges: Tapered, Square
Length: 6' to 16'









SGP 0002180

BESTWALL JOINT SYSTEMS ARCHITECTURAL SPECIFICATIONS

Scope: All walls, partitions and ceilings are included in these specifications. Furnish all labor and material necessary to reinforce and conceal joints between gypsum wallboards according to specifications.

Materials: 1. One-Material Treatment—Bestwall Joint System Cement (used for both bedding and topping and for spotting nail heads) Specially suited for remodeling and home improvement work.

2. Two-Material Treatment—Bestwall Bedding Compound, Bestwall Topping Compound. Specially designed for use on large projects.

Reinforcing Tape: Bestwall Tape

Joint Work: Apply Bestwall Bedding Compound or Bestwall Joint System Cement to the Taper Edge joints, end joints and nailheads. Shear off surplus, leaving no material on high edges. Allow 12 hours drying before taping, leaving a uniform depth of taper for uniform shrinkage of joint finishes over and under tapes.

Apply Bestwall Bedding Compound or Joint System Cement and embed tape leaving a uniform thickness of material under the tape.

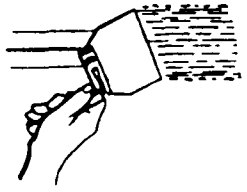
When bedding compound or Joint System Cement has whitened (surface dry) cover taped joint with Bestwall Topping Compound Shear off surplus leaving a uniform coverage over tape with edges well feathered.

The bedding compound or joint system cement under the tape and first coverage of tape with topping compound must be thoroughly dry before further treatment.

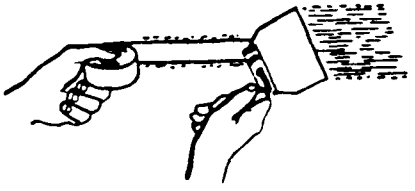
Cover joints a second time with topping compound Shear off surplus leaving a smooth, well-feathered joint.

For best results and a more uniform suction, apply a skim coat of joint system cement or topping compound over the entire surface and shear off tight in lieu of a third application of topping compound to joints only.

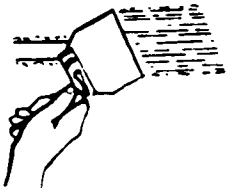
Decorating: Decorating of finished walls is to be done by others. Where a skim coat has been used to finish the wallboard, a one coat paint application may be satisfactory For best results use a prime coat over wallboard before final decoration.



Cement is "buttered" into joint.



Tape is "bedded" in cement.



Second and third coats of cement are applied over entire reinforced joint.



Cross section of finished Bestwall joint

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