

GA-226-2019 APPLICATION OF GYPSUM BOARD TO FORM CURVED SURFACE

Gypsum board may be used to form cylindrically curved surfaces. To prevent flat spots on the curved surface, framing members shall be spaced closer together than required for typical flat wall or ceiling surfaces. For minimum radius bends, framing spacing shall be not greater than 6 in. (150 mm) on center. Gypsum board shall be mechanically attached to framing using nails or screws. One-quarter inch (6.4-mm) gypsum board specially engineered for curved applications is available for tighter radii applications.

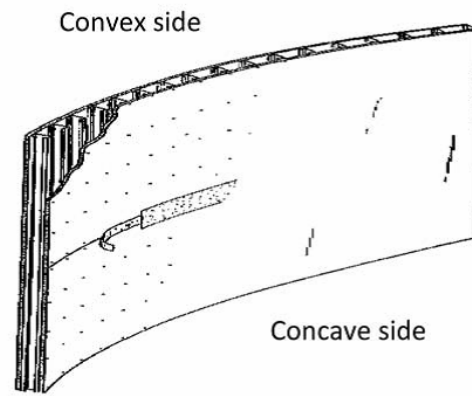
DRY BENDING

Bending radii for dry gypsum board shall be not less than those given in Table 1.

Gypsum Board Thickness	Bent Lengthwise	Bent Widthwise
1/4 in. (6.4 mm)	5 ft. (1500 mm) †	15 ft. (4600 mm) †
5/16 in. (7.9 mm)	6-1/4 ft. (1900 mm)	20 ft. (6100 mm)
3/8 in. (9.5 mm)	7-1/2 ft. (2300 mm)	25 ft. (7600 mm)
1/2 in. (12.7 mm)	10 ft. (3000 mm) †	‡
5/8 in. (15.9 mm)	15 ft. (4600 mm)	‡

† Two 1/4 in. (6.4 mm) pieces bent successively may be used to obtain a final 1/2 in. (12.7 mm) thickness at the shorter bending radius.

‡ Shall not be permitted to be bent widthwise while dry.



Gypsum board curved lengthwise

WET BENDING

Gypsum board shall be permitted to be bent to radii shorter than those in Table 1 if the face and back papers and core are thoroughly moistened, as described below.

When wetting only one side, apply water to the surface that will be in tension when the board is installed (framing side of board for concave and exposed side of board for convex surfaces). When wetting the board, apply clean water evenly to the surface. Allow to soak 10–15 minutes before bending. The board must be dried within 24 hours of wetting to prevent the development of mold. Fans and mechanical dehumidification devices should be used to accelerate drying when conditions are not conducive to natural drying. When the gypsum board dries thoroughly, its original hardness is restored.

APPLICATION OF GYPSUM BOARD TO FORM CONCAVE SURFACES

A stop shall be applied at one end of the curve to restrain one end or edge of the gypsum board during installation. Gypsum board shall be fastened by working from the restrained end or edge. Pressure shall be applied to the unrestrained end or edge of the gypsum board, forcing the field of the gypsum board into firm contact with the framing. The gypsum board shall be held tightly against the framing while fasteners are being driven. Wet gypsum board is easily damaged and shall be handled with care.

APPLICATION OF GYPSUM BOARD TO FORM CONVEX SURFACES

One end of the gypsum board shall be attached to the framing with nails or screws. The gypsum board shall be progressively pushed into contact with and fastened to subsequent framing members, working from the fixed end to the free end. The gypsum board shall be held tightly against each framing member while fasteners are being driven.

ARCHWAYS

Gypsum board may be applied to the inner face of almost any archway. For short radii, the gypsum board shall either be wetted or have the back paper scored across the width with parallel marks spaced approximately 1 in. (25 mm) on center, with the core broken at each cut. The gypsum board shall be held tightly against the supporting framing while fasteners are being driven.

FINISHING

Where a curved wall meets a ceiling, one side (or leg) of the joint tape shall be snipped from the edge of the tape to the center of the tape at approximately $\frac{3}{4}$ -in. (20-mm) intervals. The uncut half of the tape shall be applied to the curved wall surface and the cut half to the flat ceiling surface. For other curved corners, products specially manufactured for this purpose shall be used. Joints, fasteners, and accessories shall be finished in the normal manner.

GYPSUM ASSOCIATION MEMBER COMPANY LIST 2019

AMERICAN GYPSUM COMPANY LLC
 CERTAINTEED GYPSUM, INC. / CERTAINTEED GYPSUM CANADA, INC.
 CONTINENTAL BUILDING PRODUCTS OPERATING COMPANY, LLC
 GEORGIA-PACIFIC GYPSUM LLC
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