

## DESCRIPTION

Gypsum Board is the name for a family of board products consisting of a noncombustible core, primarily of gypsum, with a paper surfacing on the face, back and long edges.\*

The popularity of gypsum board results from a number of factors. First, it takes virtually any decoration – from paint or textures to vinyl and paper laminates. It also lends itself to creative shaping of interior surfaces, allowing the maximum in design flexibility. Gypsum board is an economical alternative to other products. Because it is lightweight, it is easy to handle for speedy installation. With its natural properties, it is durable yet easy to repair. In addition, gypsum board's fire resistance and sound control capabilities further demonstrate its desirability in building systems.

Ever conscious of the environmental challenges we face in today's world, National Gypsum produces its gypsum board with 100 percent recycled paper on both the face and back.

Gold Bond gypsum board is available with a variety of edge configurations. For easy joint finishing, the tapered edge is preferred to provide a monolithic surface. Where joints will be exposed, square or beveled edges should be considered. National Gypsum also manufactures gypsum board with proprietary edge configurations made to accommodate a variety of wall systems and finishing techniques.

\*GA-216

Fire and sound ratings for building systems utilizing gypsum board are dependent on the core type and thickness of the gypsum

## TECHNICAL DATA

Fire and sound ratings for building systems utilizing gypsum board are dependent on the core type and thickness of the gypsum board, its application in conjunction with the component parts, and the manner in which it is applied.

Tests for fire resistance and sound transmission, performed by independent laboratories, have resulted in specific ratings for walls/partitions; floor/ceiling assemblies; shaftwalls, stairwells and area separation walls; and columns. For maximum fire resistance and sound control, double layer construction is generally recommended since the additional mass further retards heat and noise penetration.

Gypsum board can be installed to both metal and wood framing using nails, screws or adhesives in combination with nails or screws. In many instances, the application will dictate which fastening method is appropriate.

Control joints may be necessary to prevent cracking in the gypsum board facing of drywall systems, especially in areas where structural elements such as slabs, columns or exterior walls can bear directly on non-load-bearing partitions. To relieve the stresses which occur as a result of movement induced by changes in moisture, temperature or both, control joints are required in both partitions and ceilings.

### GYPSUM BOARD INSULATING PROPERTIES

For purposes of calculating "U" values, the "C" factor for 1" gypsum board is 1.2; Resistance "R" for 3/8" board is .32; for 1/2" board .45; for 5/8" board .56 and for 1" board .83.

### WEIGHTS

- 1/4" Regular - 1.2 lbs/SF
- 3/8" Regular - 1.2 lbs/SF
- 1/2" Regular - 1.6 lbs/SF

## RECOMMENDATIONS

Examine and inspect materials to which gypsum board is to be applied. Remedy all defects prior to installation of drywall. Any defects in the finished installation due to misaligned framing or other cause will be the responsibility of the work performed under that section of the specification and such defects shall be remedied under that section of the specification.

Gypsum board shall be applied first to ceiling at right angles to framing members, then to walls. Boards of maximum practical length shall be used so that an absolute minimum number of end joints occur. Board edges shall be brought into contact with each other but shall not be forced into place.

Gypsum board joints at openings shall be located so that no end joint will align

with edges of opening unless control joints will be installed at these points. End joints shall be staggered, and joints on opposite sides of a partition shall not occur on the same stud.

Gypsum board shall be held in firm contact with the framing member while fasteners are being driven. Fastening shall proceed from center portion of the board toward the edges and ends. Fasteners shall be set with the heads slightly below the surface of the board in a dimple formed by the hammer or power screwdriver. Care shall be taken to avoid breaking the face paper of the gypsum board. Improperly driven nails or screws shall be removed.

See page 63, *Environmental Conditions and Limitations.*

### CURVED SURFACES

To apply gypsum board over a curved surface, place a stop at one end of the board and then gently and gradually push on the other end, forcing the center against the framing until the curve is complete. Shorter radii than shown in the table may be obtained by moistening the face and back papers of the board with water, stacking on a flat surface, and allowing the water to soak into the core for at least one hour. When the board is dry it will regain its original hardness.

Gypsum board may be applied to curved surfaces in accordance with the following:

### GYPSUM BOARD BENDING RADII

Thickness	Bending Lengthwise	Bending Widthwise
1/4" (6.4 mm)	5'-0" (1524 mm)	15'-0" (4572 mm)
3/8" (9.4 mm)	7'-6" (2286 mm)	25'-0" (7620 mm)
1/2" (12.7 mm)	*10'-0" (3048 mm)	
5/8" (15.9 mm)	15'-0" (4572 mm)	

\*Bending two layers of 1/4" (6.4 mm) board successively will permit a bending radius shown for 1/4" (6.4 mm) board.

**Note:** To achieve tighter bending radii, use Gold Bond 1/4" High Flex Gypsum Board. See page 75 for additional information and 1/4" High Flex minimum bending radii chart.

### SURFACE BURNING CHARACTERISTICS (Fire Hazard Classification) Tested in accordance with ASTM E 84

	Gypsum Board	Gypsum Sheathing	Durasan All Standard Patterns
Flame Spread Index	15	20	25 or less
Smoke Developed	0	0	50 or less

## SPECIFICATIONS

THE FOLLOWING PARAGRAPHS ARE FOR INSERTION INTO SECTIONS OF GENERIC SPECIFICATIONS OR GENERIC/PROPRIETARY SPECIFICATIONS COVERING GYPSUM BOARD PRODUCTS. THE NATIONAL GYPSUM PRODUCT NAME FOLLOWS THE GENERIC DESCRIPTION IN PARENTHESES.

### PART 2 PRODUCTS 2.01 MATERIALS

A. Regular Gypsum Board: A gypsum core board that is fire resistant and surfaced with paper on front/back and long edges and complies with ASTM C 1396.

1. Thickness: 1/4", 3/8", 1/2" (Gold Bond BRAND Gypsum Board)
2. Width: 4'
3. Length: 6' through 16'.
4. Edges: Square, Tapered, or Beveled Tapered (Sta-Smooth Edge).

### PART 3 EXECUTION 3.01 INSTALLATION

A. General: In accordance with the manufacturer's recommendations, National Gypsum Company "Gypsum Construction Guide."