

# Imperial® Gypsum Base, (Firecode® and Firecode® C Core)

<b>IMPERIAL</b>	FIRECODE® CORE Type X	<small>UL Classified</small> <b>USG</b>
<b>IMPERIAL</b>	FIRECODE® C CORE Type X	<small>UL Classified</small> <b>USG</b>

**A large size, rigid base for fire-rated gypsum veneer plaster systems**

- UL-Listed fire-rated veneer plaster systems.
- Special gypsum core and multi-layered laminated face paper to control water absorption, provide maximum plaster bond and resist sag.
- Panels are designed for direct or resilient attachment to wood or steel framing.
- IMPERIAL® brand bases comply with ASTM C1396/1396M and have gypsum cores UL-Classified as non-combustible per ASTM E136.
- 5/8 in Type X with Firecode Core.
- 1/2 in and 5/8 improved Type X with Firecode C Core.

**Description**

IMPERIAL® gypsum base, FIRECODE® and FIRECODE® C cores, are ideally suited for fire-rated veneer plaster systems. Available in a variety of sizes, the panels are large enough to be installed like drywall panels. The distinctive blue face paper is designed to provide the qualities desirable for veneer plaster applications, that is, it controls water absorption, provides for a strong plaster bond and resists plaster slide. The panels provide a rigid base that resists sag. When securely attached, gypsum base adds lateral stability to the assembly. Also, gypsum base partitions faced with veneer plaster on both sides have high resistance to sound transmission. Resilient attachment further improves ratings. These panels are not affected by decay, dry rot or normal moisture; they will not attract vermin.

FIRECODE core IMPERIAL gypsum base is 5/8" thick and provides Type X fire-resistant performance. FIRECODE C core IMPERIAL gypsum base in 1/2" and 5/8" thicknesses provides the highest levels of fire-resistant performance. IMPERIAL gypsum base is designed to be used with the following plaster products: IMPERIAL® veneer finish, DIAMOND® brand veneer finish, USG® Norfolk Special veneer finish, IMPERIAL® veneer basecoat and DIAMOND® veneer basecoat.

- Limitations**
1. IMPERIAL gypsum bases should only be used with veneer plaster products.
  2. IMPERIAL gypsum bases should not be used in areas exposed to excessive moisture for extended periods or as a base for adhesive application of ceramic tile (SHEETROCK® brand MOLD TOUGH® gypsum panels, or DUROCK® brand cement board are recommended for this use).
  3. Do not apply DIAMOND veneer finish, or any lime containing finish plaster, to IMPERIAL gypsum base that has faded from exposure to sunlight. Where fading has occurred, treat surface with either USG™ plaster bonder or a spray-applied solution of USG™ accelerator-alum catalyst before application of finish.
  4. Gypsum base surfaces should be isolated with control joints or other means where: (a) Partition or furring abuts a structural element (except floor) or dissimilar wall or ceiling; (b) Ceiling abuts a structural element, dissimilar wall or partition, or other vertical penetration; (c) Construction changes within the plane of the partition or ceiling; (d) Partitions or furring run exceeds 30'; (e) Ceiling dimensions exceed 30' without relief, or 50' with relief; (f) Expansion or control joints occur in the base exterior wall. Ceiling-height door frames may be used as control joints, as may door frames that are less than ceiling height, if control joints extend to ceiling from both corners.
  5. Do not exceed the maximum spacing of framing members shown in the table below.

Maximum spacing of framing members for new construction:				
		base and finish assembly	framing spacing <sup>(1)</sup>	
in.	mm		in.	mm
1/2	12.7	IMPERIAL gypsum base one layer, 1-coat system	16	406.4
		one layer, 2-coat system	16 or 24 <sup>(2)</sup>	406.4 or 609.6 <sup>(2)</sup>
		two layer, 1 & 2-coat system	24	609.6
5/8	15.9	IMPERIAL gypsum base one layer, 1-coat system	16 or 24 <sup>(2)</sup>	406.4 or 609.6 <sup>(2)</sup>
		one layer, 2-coat system	24 <sup>(2)</sup>	609.6 <sup>(2)</sup>
		two layer, 1 & 2-coat system	24	609.6

(1) For perpendicular or parallel application to framing. Perpendicular is preferred for maximum strength; parallel application is not recommended for ceilings.  
 (2) 24" (609.6 mm) spacing requires joint treatment with SHEETROCK® joint tape and SHEETROCK® setting-type joint compound (DURABOND® or EASY SAND™).



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**Directions****Preparation**

Protect the product from moisture during storage and on the job. In cold weather, heat the interior of the building to a minimum of 55 °F (13 °C) for an adequate period before the application of plaster, while basecoat and finish is being applied, and until the finish is dry. Air circulation should be kept at a minimum level during this period. **Warning:** Store all IMPERIAL gypsum base flat. Panels are heavy and can fall over, causing serious injury or death. Do not move unless authorized.

Under normal working conditions, joints of veneer plaster systems may be treated by applying IMPERIAL® tape Type P (pressure-sensitive) or Type S (staple) to the joints and then applying the veneer plaster basecoat or finish to preset the tape. However, there are a number of special situations that require the use of a setting-type joint treatment system.

— High building temperature, low humidity or excessive evaporation that creates "rapid drying" conditions.

— Metal framing is specified.

— Certain wood-framing applications with spacing of 24" o.c. (see Maximum Spacing table above).

Under any of these conditions, use SHEETROCK joint tape and SHEETROCK setting-type (DURABOND) or lightweight setting-type (EASY SAND) joint compound to treat all joints and internal angles. Allow the joint treatment to set and dry thoroughly before plaster application. Mist with water prior to initial plaster application.

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**Installation**

IMPERIAL gypsum base may be installed either perpendicular (preferred) or parallel to the framing. All ends and edges should be placed over framing members except where edge joints are perpendicular to framing. Use maximum practical lengths to minimize end joints. Install gypsum base first on ceilings and then on walls. Over steel studs, arrange direction of installation so that the lead edge of the base is attached to the open side of the stud flange first. Bring base panels into contact with each other, but do not force into place. Fit abutting ends and edges neatly; stagger end joints; arrange joints on opposite sides of partition so they occur on different studs.

Begin driving fasteners in center of panel and work toward ends and edges, holding gypsum base in firm contact with framing. Space fasteners as shown in table and not less than 3/8" from edges and ends of panel. Drive fastener heads flush with surface without breaking the face paper. If gypsum base appears to be loose from framing, install additional fasteners. Float vertical and horizontal interior corners by placing fasteners 8" out from the corner. Where framing is parallel with the corner, attach one panel to corner framing and float the abutting panel. Cut and fit gypsum base neatly around pipes and other openings. Remove loose face paper around cuts and use quick-setting plaster to close openings.

**Control Joints**—Apply control joints, where required, over the face of the gypsum base. Cut to required lengths with fine-toothed hack saw. Cut end joints square, align and butt together slightly gapped. Attach the control joint to gypsum base temporarily with 9/16" rosin-coated staples spaced 12" o.c. along each flange. Complete the installation of the control joint with fasteners (nails or screws) driven through the control joint flange into the framing on each side of the joint. The protective plastic tape over the open groove should be left in place until finishing is completed.

**Metal Trim**—Fasten gypsum base in normal manner but omit fasteners at framing member where metal trim is to be installed. Leave a space 3/8" to 1/2" wide between edge of base and face of jamb or wall. This provides space for hardware or door bucks and allows for expansion when trim is used for perimeter isolation. Slip trim over edge of base with expanded mesh flange on face side. Fasten to base by nailing or stapling 12" o.c.

**Vinyl Trim**—Slip vinyl trim over gypsum base with long flange behind base. Install the base with the trim firmly abutting the surface.

**Corner Bead**—Apply to all external angles. Hold tightly against angle and fasten to base by nailing or stapling 12" o.c. alternately on both flanges along entire length.

**Acoustical Sealant**—Seal edges of gypsum base around entire perimeter of partition. Also, seal air-tight all penetrations of the gypsum base, particularly electrical boxes. In addition to sealing the perimeter of electrical boxes, coat the back sides with a layer of acoustical sealant. Apply acoustical sealant under control joints and similar openings between the gypsum base and abutting materials.

**Product Data**

**Materials:** Panels with gypsum core, paper encased, square or tapered edges.  
**Compliance with Standards:** IMPERIAL gypsum base meets ASTM Designation ASTM C1396/1396M.  
**Thermal coefficient of expansion (unrestrained):**  $9.2 \times 10^{-6}$  in./in. x °F (40-100 °F); 16.2 mm/km x °C (4-38 °C).  
**Hygrometric coefficient of expansion (unrestrained):**  $7.2 \times 10^{-6}$  in./in. x °F (7.2 mm/km x °C) at 5-90% R.H.  
**Storage:** Store material in a cool, dry place. Avoid direct sunlight. Maintain temperature above 40 °F (4 °C).  
**Availability and Cost:** IMPERIAL gypsum base is distributed throughout the United States. Contact a United States Gypsum Company sales office or sales person for additional information.  
**Types, sizes, packaging and weights:**

Product	Thickness		Width		Length		Pc./ bdl.	Approximate weight	
	in.	mm	in.	mm	ft.	mm		lb./ 1000ft. <sup>2</sup>	kg/ 100m <sup>2</sup>
IMPERIAL Base									
FIRECODE	5/8	15.9	48	1219.2	8	2438.4	2	2330	1140
FIRECODE C	5/8	15.9	48	1219.2	14	4267.2	2	2480	1210

**Submittal Approvals:**

<b>Job Name</b>		
<b>Contractor</b>		<b>Date</b>

**Trademarks**

The following trademarks used herein are owned by United States Gypsum Company: DIAMOND, DURABOND, DUROCK, EASY SAND, FIRECODE, IMPERIAL, MOLD TOUGH, SHEETROCK, USG, USG in stylized letters.

**Note**

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

**Notice**

We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

**Safety First!**

Follow good safety and industrial hygiene practices during handling and installing 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.

