

# IMPERIAL® Brand Basecoat Plaster

## 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.

If possible, maintain building temperature-humidity combination in the “normal drying” area of the graph below. When dry conditions exist, relative humidity often can be increased by wetting down the floor periodically. During these periods, make every effort to reduce air movement by closing windows and deflecting heater blower and duct output away from the surfaces being plastered. If the building temperature-humidity combination is in the “rapid drying” area of the graph on page 2, or IMPERIAL Brand Gypsum Base is applied over steel studs, special joint treatment measures must be taken. These include the use of a SHEETROCK® Brand 90 or 210 Setting-Type Joint Compound (DURABOND®) or SHEETROCK® Brand Lightweight Setting-Type Joint Compound (EASY SAND™) and SHEETROCK® Brand Joint Tape. Follow the directions below under “Joint Treatment” section of “Application.”

## Application

### Mixing

Mix plaster with a cage-type paddle driven by a heavy-duty drill capable of producing 900-1000 rpm minimum under no load. Approximate water-plaster ratios for IMPERIAL Brand Basecoat (hand or machine application) are 8 to 10 qt./80 lb. (7.5-9.5 L/36.3 kg) bag.

Place the water in a 12- to 15-gal. smooth-sided container. Start the mixer, slowly add plaster and mix at least 2 minutes to disperse lumps completely. Do not mix more than 5 minutes.

### Joint Treatment

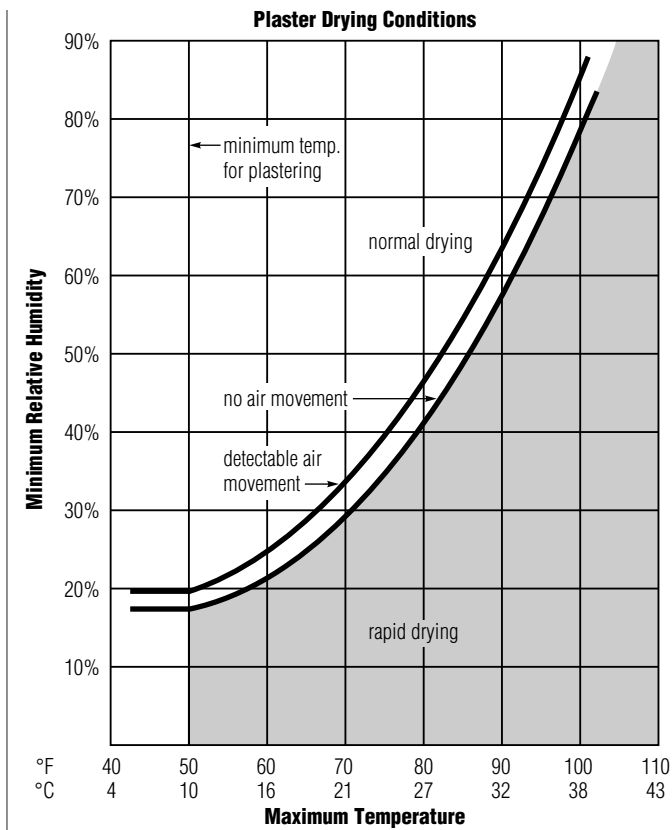
For normal drying conditions—Apply IMPERIAL® Brand Tape over all joints (edges and ends). Do not overlap tape at intersections.

Align IMPERIAL® Brand Type P (pressure sensitive) Tape over the joint and press it into place over the entire length of the joint. Eliminate wrinkles and assure maximum adhesive bond by pressing the entire length of tape with a steel finishing knife or trowel. Press the tape into corners with a corner tool. Do not overlap.

Alternatively, attach IMPERIAL® Brand Type S Tape with spring-driven hand stapler using 3/8” staples. Use two staples at each end of the tape; staple the remainder at staggered 24” intervals. At wall-ceiling angles, staple every 18” to 24” along the ceiling edge only. For wall-to-wall interior angles, staple every 18” to 24” on one edge only, working from top to bottom. Position the tape to bridge the joint at all interior corners without overlapping. For fire-rated assemblies, staple either Type P or Type S Tape 8” o.c.

**SHEETROCK® Brand Joint Treatment System** When building temperature-humidity conditions fall in the “rapid drying” area of the graph or IMPERIAL Brand Gypsum Base is applied over steel studs, use SHEETROCK® Brand Joint Tape embedded with SHEETROCK® Brand DURABOND® 90 or 210 Setting-Type Joint Compound or SHEETROCK® Brand EASY SAND™ Lightweight Setting-Type Joint Compound. Mix the compound in a clean 5-gal. container (plastic is preferred). Use a commercial potato masher or a 1/2” heavy duty 200- to 300-rpm electric drill with a drywall blade-type mixing paddle. Drill speed must not exceed 400 rpm. Use the amount of water shown on the bag and always sift the powder into the water to ensure complete wetting. Stir vigorously for 3 minutes; if lumps remain, allow the mix to soak for a minute or two then restir until smooth. **Note:** Do not contaminate compound with other materials, dirty water or previously mixed batches. Do not retemper batches.

Butter joints with compound using a trowel or steel finishing knife to force compound into the joints. Center SHEETROCK Brand Joint Tape and press it into the fresh compound with trowel held at a 45° angle. Draw trowel along joint with sufficient pressure to remove excess compound. After tape is embedded, apply a skim coat of joint compound to reduce possibility of edge wrinkling or curing. Allow joint treatment to set and dry thoroughly before plaster application. Plaster prefill is not required over SHEETROCK Brand Setting-Type Joint Compound. Mix and apply a finish coat, feathering 3” to 4” beyond edges of tape. Allow to set before plastering.



**Plastering**

IMPERIAL Brand Plasters provide a wide range of finish options with three distinct application systems:

1. IMPERIAL Brand Finish (one-coat, basecoat plaster is not used)
2. IMPERIAL Brand Basecoat with selected plaster finishes (two-coat)\*
3. IMPERIAL Brand Basecoat MA with selected plaster finishes (two-coat)\*

\*Note that USG® Acoustical Plaster Finish may be applied directly to IMPERIAL Brand Basecoat when a sound-rated spray plaster texture is desired.

**IMPERIAL Brand Basecoat Plaster (hand-applied)** Scratch-in a tight, thin coat of IMPERIAL Brand Basecoat over the entire area, immediately doubling back with plaster from same batch to the full thickness of 1/16" to 3/32". Fill all voids and imperfections. Leave the surface rough and open for the proper bond of finish coat. Allow the basecoat to set and partially dry to provide proper suction for the finish coat.

For IMPERIAL Basecoat/Basecoat MA (Two-Coat) Applications	Product	Ratio of mix (dry wt.)			Approx. coverage <sup>(1)</sup>		Finish Characteristics
		Lime <sup>(2)</sup>	Gauging <sup>(3)</sup>	Sand <sup>(4)</sup>	ft <sup>2</sup> /ton	m <sup>2</sup> /ton (metric)	
<b>Veneer Finishes/ High Strength— Superior Surface Hardness</b>	IMPERIAL Brand Finish Plaster	—	—	—	3200-3600	330-340	<b>Prepared Finish</b> —Ultimate in surface hardness and abrasion resistance. Easily textured. Low productivity due to additional work necessary to achieve a smooth finish.
	DIAMOND Brand Interior Finish Plaster <sup>(2)</sup>	—	—	—	6000	615	<b>Prepared Finish</b> —Single bag, ready-to-use finish. Moderate strength. Acceptable workability. Extremely adaptable to textured finishes. Satisfactory smooth finish.
<b>Gauged Lime Putty Finishes/ Standard Surface Hardness</b>	RED TOP Finish <sup>(2)</sup>	—	—	—	4450	460	<b>Prepared Finish</b> —Hard dense prepared putty finish. Highest degree of workability of prepared finishes. Joinable, dense, smooth finish.
	STRUCTO-GAUGE Plaster	1 2	1 1	— —	2940 4450	300 460	<b>Lime Gauging Finish</b> —1:1 Hard dense putty finish; 2:1 Moderate surface hardness putty finish. Good workability and ease of application. Excellent finish appearance.
	RED TOP, CHAMPION & STAR Gauging Plasters	2 2	1 1	— 8	4040 2900	410 300	<b>Lime Gauging Finish</b> —High productivity. Best workability putty finish. Joinable, easiest to achieve a monolithic finish. Good surface hardness.
	RED TOP Keenes Cement	2 1 2	1 1 1	8 — —	2430 3330 3870	250 345 400	<b>Lime Gauging Finish</b> —Unique, only truly retemperable material. Ultimate choice for texturing. Can be floated for extended time period or built up to promote heavy, drawn down type texture finishes. Can be used for coloring or tinting large plaster wall area.

(1) Total mix. (2) Packaged in 50 lb. (22.7 kg) bag. (3) Packaged in 100 lb. (45.4 kg) bag. (4) Natural, uniform, graded, clean silica sand.

Finish coat materials are applied by scratching in and doubling back with the selected finish (see table above) to achieve a smooth, dense surface for decoration, free of surface blemishes. For textured finishes, floating or texturing is conducted once the surface has become firm or textured with additional material from the same batch. Float finishing should be conducted using water sparingly to avoid texture and color variation.

For a spray-applied finish, mix RED TOP Keenes Cement-lime-sand in proportion of 50 lbs. (23 kg) Keenes Cement to 100 lbs. (45 kg) dry double-hydrated lime, and up to 400 lb. (180 kg) but not less than 200 lb. (60 kg) clean, properly graded silica sand with sufficient water to form a smooth consistency for hand application. Apply this mix evenly over a properly prepared IMPERIAL Brand Basecoat surface by first applying a well-ground-in scratch coat, then immediately double-back with sufficient material to cover the basecoat to a total thickness of 1/16" to 1/8". When the surface has become firm by water removal, float the surface to a uniform blemish-free flat texture. After floating, and while the application is still wet but totally firm, prepare additional finish material with the consistency adjusted for spray application. With either a hand-held hopper gun or machine-application equipment without catalyst spray, apply texture to provide a uniform texture appearance. Vary aggregate grading, aggregate proportion, number of passes over the surface, air pressure and nozzle orifice size as necessary to achieve the desired finish. For more information about spray-applied finishes, see USG publication PM6, *Veneer Plaster Application Technique*.

**IMPERIAL Brand  
Basecoat Plaster  
(machine-applied)**

Machine application of IMPERIAL Brand Basecoat Plaster (MA) requires special equipment that provides for automatic catalyst injection. The machine should be operated in strict accordance with the manufacturer's directions. Successful results require advance job planning and operator training. The plaster base should be protected from overspray or contamination by lime or casein materials. Such materials adversely affect the bonding characteristics of plaster. Mask all areas to be protected from plaster overspray with plastic sheeting or paper secured with masking tape.

Mix one to three 3-lb. bags of USG™ Accelerator—Alum Catalyst in 3 gal. of clean water in a plastic pail. The amount of catalyst used will be determined by the desired setting time. Stir until the material dissolves, then let the residue settle and pour the solution into the accelerator tank of the machine.

Mix the plaster as previously described and pour it into the machine through the 8x8-mesh screen hopper. Adjust water in plaster mix until 75% to 90% will pass the screen without shaking. **Caution:** Clean the mixing equipment after each batch. Clean the hopper and screen free of set plaster to avoid acceleration. The machine should be completely cleaned after each four hours of use. Adjust the setting time by controlling the catalyst flow at the machine. Test by spraying plaster on plaster base scrap.

With the setting time adjusted to 30 minutes, spray the taped joints and corner-bead flanges in a pattern wide enough to cover the tape and metal trim flanges. Immediately trowel level, completely embedding the tape and metal-component flanges. Leave no voids. Allow to set before plastering. This initial spraying is not required over SHEETROCK Brand Setting-Type Joint Compound (DURABOND or EASY SAND).

Adjust the set for 20 to 30 minutes, then spray IMPERIAL Brand Basecoat Plaster (MA) over the entire area to a thickness of 1/32", then immediately cross-spray to a total thickness of 1/16". Allow the plaster to set and dry sufficiently to provide proper suction for the finish coat.

Apply the finish as described above for hand-applied basecoat.

**IMPERIAL Brand  
Basecoat Plaster  
applied to  
concrete block**

The surface must be porous and develop proper suction or be scored to provide adequate mechanical bond. Lightly spray the walls with water to provide uniform suction. Fill and level all voids, depressions and joints with IMPERIAL Brand Basecoat Plaster and allow it to set; then apply subsequent coats as with gypsum base application, leaving the final surface rough and open to provide proper bonding of the finish coat.

**IMPERIAL Brand  
Basecoat Plaster  
applied to  
monolithic concrete**

Prepare the surface with an application of USG™ Plaster Bonder. Fill all voids and depressions with IMPERIAL Brand Basecoat Plaster and allow it to set and partially dry. Then apply IMPERIAL Brand Basecoat Plaster as with gypsum base or concrete block. **Important:** As no suction is provided over surfaces treated with a plaster bonding agent, it is essential that the applied basecoat surface be raked or broomed once the material has become firm for a rough and open surface to provide proper suction for the finish coat. Failure to do so may result in delamination of the finish material.

**Trademarks**

The following trademarks used herein are owned by United States Gypsum or a related company: CHAMPION, DIAMOND, DURABOND, EASY SAND, IMPERIAL, RED TOP, SHEETROCK, STAR, STRUCTO-GAUGE and USG.

**Note**

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

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**SAFETY FIRST!**

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