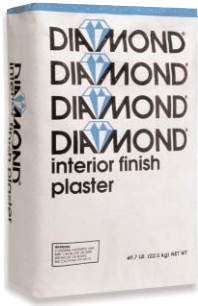


DIAMOND® Brand Interior Finish Plaster— Regular, Sanded, Type F and Type F-Sanded



For economical, abrasion-resistant walls and ceilings

- Harder than regular gauging and lime putty finish.
- Finish coat of either a one- or two-coat veneer plaster system.
- Fast applying—permits next day decorating.
- Excellent coverage—as much as 6,000 sq. ft. per ton.
- Choice of smooth trowel or textured finishes.
- Job-sanded for use as radiant heat plaster.

Description

DIAMOND® Brand Interior Finish Plaster is a white finish formulated for hand application over IMPERIAL® Brand Gypsum Base or as a finish of a two-coat system over a sanded gypsum basecoat, IMPERIAL® Brand Basecoat Plaster or DIAMOND® Brand Veneer Basecoat Plaster. Applied to a nominal 1/16" to 3/32" thickness, this veneer finish is unaggregated for a smooth or skip-trowel finish; may be job-aggregated with up to an equal part by weight of clean silica sand for Spanish, swirl, float or other types of texture.

DIAMOND Brand Interior Finish Plaster is recommended for interior wall and ceiling surfaces, as well as over properly prepared monolithic concrete, in residential construction single-family dwellings, high-rise buildings and garden apartments. It provides a strong, hard surface capable of resisting both abrasion and surface cracking.

DIAMOND Brand Interior Finish Plaster is also ideal for use in electric cable systems (if properly job-sanded) and in the USG™ Decorative Interior Finish System. See the special use instructions for these applications in PM12, "Recommendations for Producing Colored Interior Walls and Ceilings" and PM16, "Application Directions for DIAMOND® Brand Interior Finish in Electric Cable Heat Systems." Besides Regular DIAMOND Brand Interior Finish Plaster, there are three special-purpose formulas for this product:

DIAMOND Brand Interior Finish Plaster—Sanded is a pre-aggregated formula for texture finishes and is available in selected geographic areas.

DIAMOND Brand Interior Finish Plaster—Type F is a secondary formula for quicker (faster) finishing with the same unique setting quality as the regular DIAMOND Brand Interior Finish Plaster.

DIAMOND Brand Interior Finish Plaster—Type F—Sanded combines both of the formulas described above. It is available in selected geographic areas.

Advantages

Fast completion: Provides rapid, easy application and increased productivity with high coverage (as much as 6,000 sq. ft. per ton). DIAMOND Brand Interior Finish Plaster can be decorated when dry in as little as 24 hours with good drying conditions using a latex-based breather-type paint. This feature minimizes costly delays and speeds occupancy.

Versatility: This material can be richly textured or finished smooth to a hard, dense surface. The finished surface is several times harder than standard drywall, and provides resistance to scuffs, scrapes and dents common with everyday traffic.

Joinability: Work can be halted anywhere because the material is joinable. Rooms can be topped out and re-scaffolding eliminated.

Whiteness: In many residential markets, the beautiful white monolithic finish may be left undecorated if skip-trowel, floated or other textured finishes are utilized. However, decoration should be specified and may be eliminated later if finish is acceptable.

Economy: This product's high coverage and time-saving installation features provide important savings where the ultimate strength (3000 psi) of IMPERIAL® Brand Finish Plaster is not required.

Fire and sound ratings: Wall and ceiling systems completed with DIAMOND Brand Interior Finish Plaster offer fire ratings up to four hours. Sound-rated assemblies up to 62 STC satisfy any residential or commercial requirement.

Limitations

1. Not recommended where contact with water or excessive moisture may be encountered.
2. Not recommended for use over portland cement basecoat or direct to masonry surfaces. Use IMPERIAL Brand Basecoat or DIAMOND Brand Veneer Basecoat Plaster applied directly to concrete block or over a bonding agent on poured concrete prior to application of DIAMOND Brand Interior Finish Plaster as the finish coat.
3. Machine application is not recommended.
4. For recommendations over monolithic concrete, see "Application direct to monolithic concrete" under "Directions."

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.

If possible, maintain building temperature-humidity combination in the “normal drying” area of the following graph. 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, follow directions below under “Joint Treatment.”

SHEETROCK® Brand Joint Tape and SHEETROCK® Brand Setting-Type Joint Compound (DURABOND®) or SHEETROCK® Brand Lightweight Setting-Type Joint Compound (EASY SAND™) must be used to treat all joints and internal angles when any of the following conditions exist: Rapid drying conditions due to low humidity, high temperature and excessive evaporation; metal framing is specified; 24” o.c. wood frame spacing and a single-layer gypsum base veneer system is specified (5/8” base with one-coat veneer finish and 1/2” or 5/8” base with two-coat veneer finish). Allow joint treatment to set and dry thoroughly before plaster application.

Protect all finish materials and finish surfaces from contact with DIAMOND Brand Interior Finish Plaster. These include glass, ceramic materials, metal and wood. Apply wood, plastic or other exposed trim after finish application.

Gypsum base applications—DIAMOND Brand Interior Finish Plaster should be applied to IMPERIAL Brand Gypsum Base having blue face paper. However, under abnormal conditions where there is no alternative to using gypsum base faded from excessive exposure to sunlight or ultraviolet radiation, precautions should be taken to prevent delamination. Degrading may occur when gypsum base has been installed long before the finish is applied. Degraded gypsum base is indicated if the face paper is not blue or grayish blue. When the face paper color becomes gray to tan, treat the paper with USG™ Accelerator—Alum Catalyst. Note: If USG Accelerator—Alum Catalyst is not used, an alternative corrective procedure is to use USG™ Plaster Bonder over the faded IMPERIAL Brand Gypsum Base. Use of USG Plaster Bonder to correct the condition will require that a two-coat veneer plaster system be used, since the bonder application will eliminate base suction needed for proper one-coat veneer application. For alum solution treatment, dissolve three lb. of alum in one gal. water. Pour alum slowly into water and mix thoroughly. Allow solution to stand until any undissolved materials have settled; then strain solution into tank-type sprayer (such as a lawn and garden sprayer). One gallon of solution should treat 750 sq. ft. of base. Begin finish application before alum solution is completely dry. **Note:** Alum treatment reduces setting time of DIAMOND Brand Interior Finish Plaster.

One-coat system applications—Apply SHEETROCK® Brand No. 800 Corner Bead (No. 900 for two-coat system) to gypsum base with 9/16” rosin-coated staples 9” o.c. on both flanges along entire length of bead.

Monolithic concrete applications—Apply DIAMOND Brand Interior Finish Plaster only to interior, structurally sound, clean, smooth monolithic surfaces that have been treated with a high-quality bonding agent, such as USG™ Plaster Bonder. The bonding agent should be applied in accordance with the manufacturer’s directions. Grind ridges and high points flush, and brush surface clean of loose particles. Slight irregularities (less than 1/8”) do not interfere with smooth application. Treat voids and depressions with the bonding agent before pre-filling. Pre-fill voids and depressions with IMPERIAL Brand Basecoat Plaster, DIAMOND Brand Veneer Basecoat Plaster, or with DIAMOND Brand Interior Finish Plaster job-aggregated with one-half to one full part sharp, clean, fine silica sand. After application, leave these areas rough and open, and allow them to set. The pre-fill should not be more than 1/4” thick. If pre-filled areas are allowed to dry overnight, recoat these areas with USG Plaster Bonder prior to application of the plaster product. If pre-filled areas are still “green” (set, but not dry), there is no need to recoat the surface with the bonding agent.

Job-aggregate the finish coat of DIAMOND Brand Interior Finish Plaster with one-half to one full part sharp, clean, fine silica sand. Although this material may be applied unaggregated, the sand promotes good mechanical bond between the finish coat and the bonder/concrete substrate. The sand-aggregated finish also builds up material over slight irregularities, producing an acceptable monolithic finished surface without detracting from smooth finishing. In addition, the aggregated finish provides options for sand float or other sand textured surfaces. **Note:** Delay smooth troweling or texturing until DIAMOND Brand Interior Finish Plaster surface has become firm and stiff enough for texturing.

Application—Joint Treatment

For normal drying conditions—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.

Embed the tape and fill beads with a coat of DIAMOND Brand Interior Finish Plaster and allow to set—but *not dry*—prior to finish application. Slightly underfill in the bead by screeding along the bead with edge of trowel after setting the bead. (Best results are obtained by planning the job to permit continuous application from angle to angle.)

For rapid drying conditions—SHEETROCK Brand Joint Tape and SHEETROCK Brand Setting-Type Joint Compound (DURABOND) or SHEETROCK Brand Lightweight Setting-Type Joint Compound (EASY SAND) must be used to treat all joints and internal angles when building temperature-humidity conditions fall in the “rapid-drying” area of the graph below.

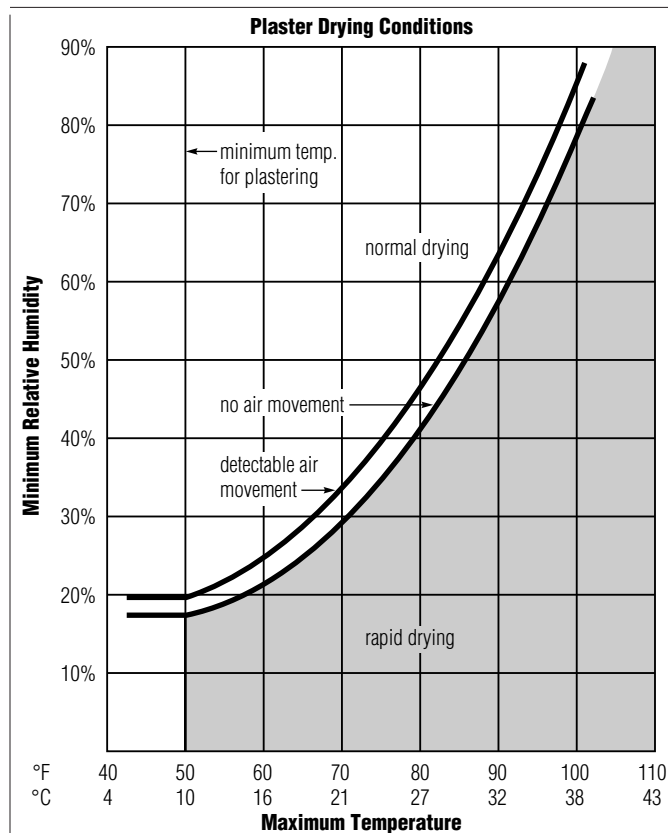
Mix the compound in a clean 5-gal. container (plastic is preferred). Use a commercial potato masher or a 1/2” heavy duty 200- to 300-rpm electric drill with a blade-type drywall paddle. Drill speed should not exceed 450 rpm. Use the amount of water shown on the bag and always sift the powder into the water to insure complete wetting. Stir vigorously for 3 minutes; if lumps remain, allow the mix to soak for 1 to 2 minutes, then restir until smooth. **Note:** Do not contaminate the compound with other materials, dirty water or previously mixed batches. Do not retemper batches.

Apply compound to the joints using a trowel or steel finishing knife to force the compound into the joints. Center the SHEETROCK Brand Joint Tape over the joint and press it into the fresh compound with a trowel held at a 45° angle. Draw the trowel along the joint with sufficient pressure to remove excess compound.

After the tape is embedded, apply a skim coat of joint compound to reduce the possibility of edge wrinkling or curling. Allow the skim coat to set, then apply a separate finish coat, completely covering the tape and feathering 3” to 4” beyond the edges of the tape. The tape must be fully concealed to prevent photographing due to the final finished suction over the joint-compound-treated area. Allow the joint treatment to set and dry thoroughly before plaster application. Plaster prefill is not required over SHEETROCK Brand Setting-Type Joint Compound.

Note: SHEETROCK Brand Joint Tape and SHEETROCK Brand Setting-Type Joint Compound (DURABOND) or SHEETROCK Brand Lightweight Setting-Type Joint Compound (EASY SAND) also must be used to treat all joints and internal angles when either of the following conditions exist: Metal framing is specified; or 24” o.c. wood-frame spacing and a single layer gypsum base veneer system is specified (5/8” base with one-coat veneer finish and 1/2” or 5/8” base with two-coat veneer finish.) Single layer 1/2” base is not recommended with 24” o.c. spacing and one-coat veneer plaster.

The graph below identifies conditions of rapid drying when the alternate use of paper tape and setting-type joint compound are required for proper joint reinforcement.



Application—Mixing

DIAMOND Brand Interior Finish Plaster will produce mortar of maximum performance and workability when the correct equipment is used and mixing directions are carefully followed. Proper mixing is an important factor in producing mortar of maximum workability.

Use a cage-type mixer paddle driven by heavy-duty 1/2" electric drill with no-load rating of 900 to 1,000 rpm. Do not use a standard drywall-compound propeller-type paddle or a conventional mortar mixer. (For details of the cage-type mixing paddle and proper electrical drill, see Direction Sheet P502.)

Mix the finish in a 12- to 15-gal. smooth-side container strong enough to withstand impacts that could cause gouging. Do not use brittle containers for mixing. Correct mixing (rapid and high shear action) are essential for proper dispersion of finish ingredients. Slow mixing reduces plasticity of material. Overmixing shortens working time. Operated at correct speed, the cage-type paddle mixes thoroughly, developing maximum plasticity for high coverage and productivity.

Water usage is approximately 12 to 15 qt. per 50-lb. bag. Place all but 1 to 2 qt. of clean water in the mixing container and, with the mixer operating, slowly add one bag of plaster. When the material is wetted, use additional water (1 to 2 qt.) to obtain the desired mortar consistency. Mix for a minimum of two minutes but no longer than five minutes. The finish sets in approximately one hour. Do not mix more than can be applied in 30 minutes, and do not retemper.

If DIAMOND Brand Interior Finish Plaster is job-aggregated, a suitable retarder must be added. Add 1/4 to 1/2 teaspoon of USG™ Retarder for Lime Containing Plasters per bag of aggregated DIAMOND Brand Interior Finish Plaster to the mixing water to allow sufficient working time. Cream of Tartar is an alternative retarder for use with DIAMOND Brand Interior Finish Plaster.

Application—Plastering

This interior finish is intended for hand application over veneer or conventional sanded plaster basecoats, as well as direct to gypsum base as a one-coat system. It may be applied over monolithic concrete by following the directions below. Machine application is not recommended. When applied over veneer or conventional sanded plaster basecoat, be certain the basecoat is not completely dry. The basecoat should be rough and open and allowed to set and only partially dry to provide suitable suction for the finish.

Application to gypsum base—Begin application only after the joints have been reinforced with glass-fiber tape and preset with an application of DIAMOND Brand Interior Finish Plaster (or treated with SHEETROCK Brand Joint Tape and SHEETROCK Brand Setting-Type Joint Compound, DURABOND or EASY SAND). Apply a thin, tight scratch coat of the finish over the entire working area. Immediately double back with material from the same batch to a nominal 1/16" to 3/32" thickness.

Start finish troweling as soon as the material has become sufficiently firm to achieve a smooth finish free from marks, voids and other blemishes. Smooth and level the surface with the trowel held flat; use water sparingly to lubricate. Final smooth troweling should be accomplished prior to set as indicated by darkening of the surface.

A variety of textures ranging from sand float to heavy Spanish can be achieved with DIAMOND Brand Interior Finish Plaster when it is job-aggregated with silica sand. The application is the same as for neat DIAMOND Brand Interior Finish Plaster, except that once the surface has been leveled and sufficient take-up has occurred, begin floating the material with trowel, float, sponge or by other accepted local techniques. **Note:** Sand additions will quicken the setting time. The use of USG Retarder or Cream of Tartar may be required to lengthen the set to the normal working range of 60 to 75 minutes.

DIAMOND Brand Interior Finish Plaster also may be textured by skip-troweling. When applying in this manner, eliminate final troweling. When the surface has become sufficiently firm, texture with material from the same batch prior to set.

Application direct to monolithic concrete—U.S. Gypsum recommends that DIAMOND Brand Interior Finish Plaster be job-aggregated with one-half to one part clean, sharp, fine silica sand. Although this material may be applied unaggregated, the sand promotes good mechanical bond between the finish coat and the bonder/concrete substrate. The sand-aggregated finish also builds up material over slight irregularities, producing an acceptable monolithic finished surface without detracting from smooth finishing. In addition, the aggregated finish provides options for sand float or other sand-textured surfaces.

Note: Delay smooth troweling or texturing until DIAMOND Brand Interior Finish Plaster surface has become firm and stiff enough for texturing.

Application to radiant heat ceilings over gypsum base—When applying finish to IMPERIAL Brand Gypsum Base, first apply a fill coat of job-sanded DIAMOND Brand Interior Finish Plaster (1/2 to 1 parts by weight sand per bag) parallel to the direction of the cable and of sufficient thickness to completely cover the cable. Do not use the cable as a screed. Level the fill coat with a trowel, rod or darby to fill any low spots or to remove any high ridges, etc. "Tooth" fill coat to provide a key for the finish coat by the use of a serrated darby or by lightly brooming prior to set. The average thickness of the fill coat should be 3/16".

The finish coat should not be applied until after the fill coat has developed sufficient suction. In good drying weather this takes about two hours after the fill coat has set; in damp and/or cold weather the time interval might extend overnight. Thus proper heat and ventilation should be provided. Apply job-sanded DIAMOND Brand Interior Finish Plaster (1/4 to 1 parts by weight sand) to a finish thickness between 1/16" minimum and 3/32" maximum. Scratch in a tight, thin coat over the entire area, immediately doubling back to the full thickness. Fill all imperfections.

Scratch and double back with the same mix of DIAMOND Brand Interior Finish Plaster. When the surface has become firm, hold the trowel flat and final trowel using water sparingly. Best results are obtained by continuous application of an entire ceiling. The total thickness of fill and finish coats should be 1/4". Always work to a wet edge to avoid dry joinings.

Application to radiant heat ceilings over monolithic concrete—Use USG™ Plaster Bonder in accordance with the manufacturer's directions, prior to the application of DIAMOND Brand Interior Finish Plaster directly to monolithic concrete.

The concrete surface must be clean, free of dirt, dust, grease, wax, oil or other unsound conditions and level. Coat all metal components in the concrete surface to prevent rusting in the plaster. Remove form ridges. Locate uneven ceiling areas that may require filling prior to installation of electric cable and plastering. Treat these areas with USG Plaster Bonder. Then apply DIAMOND Brand Interior Finish Plaster (fill-coat mix) as a leveling coat and allow it to set. **CAUTION:** Temperature of concrete ceiling with bonding agent and cable must be above 32 °F before plastering is started. Air temperature must be above 55 °F.

Apply job-sanded DIAMOND Brand Interior Finish Plaster to a thickness of 3/8" in two coats to provide a level surface. First apply a fill coat of finish (sanded 1/2 to 1 parts by weight sand per bag of product) parallel to the direction of the cable averaging 5/16" thick and of sufficient thickness to cover the cable and anchor device. Do not use cables as a screed. Level the fill coat with a trowel, rod or darby to fill any low spots or to remove any high ridges, etc. The surface should be made rough to provide mechanical key or "tooth" for the finish coat by the use of serrated darby or by lightly brooming prior to set.

The finish coat should not be applied until after the fill coat has developed sufficient suction. In good drying weather this takes about two hours after the fill coat has set; in damp and/or cold weather the time interval might extend overnight. Thus proper heat and ventilation should be provided. Apply a finish coat of job-sanded DIAMOND Brand Interior Finish Plaster to provide a total thickness of 3/8".

Apply job-sanded DIAMOND Brand Interior Finish Plaster (no less than 1/4 to 1 parts by weight sand per bag of product) to a finish thickness between 1/16" minimum and 3/32" maximum. Scratch in a tight thin coat over the entire area, immediately doubling back to the full thickness. Fill all voids and imperfections. Scratch and double back with the same mix of DIAMOND Brand Interior Finish Plaster. When the surface has become firm, hold the trowel flat and final trowel using water sparingly. Do not over-trowel. Best results are obtained by continuous application over the entire ceiling. Always work to a wet edge to avoid dry joinings.

For additional information regarding cable heat systems, see PM16, "Application Directions for DIAMOND® Brand Interior Finish in Electric Cable Heat Systems."

Application—Decorating

DIAMOND Brand Interior Finish Plaster can be painted with acrylic or other high-grade latex breather-type paints the day following application, if the plaster is completely dry. **Note:** Polyvinyl acetate primers are highly susceptible to moisture; hence they can cause paint delamination when applied over wet plaster finishes. Before applying acrylic or latex breather-type paints, be sure the DIAMOND Brand Interior Finish Plaster surface is dry. If alkyd or oil-based paints are used, the DIAMOND Brand Interior Finish Plaster surface in addition to being dry must also be sealed with a good quality alkali-resistant sealer.

If wallpaper is to be applied, the surface must be sized before papering. The finish also is available with little tendency to spall. When used as a finish over IMPERIAL Brand Basecoat, DIAMOND Brand Veneer Basecoat Plaster, conventional sanded gypsum plaster (RED TOP® or STRUCTO-BASE®), or in a radiant heat ceiling application as described above, additional drying time should be anticipated due to the increased application thickness. When dry, the application can be painted with an acrylic or latex breather-type paint. To achieve a high quality finished surface, the plaster application should be properly sealed before painting. Use of an alkali-resistant sealer is recommended. For specific recommendations consult the specified paint manufacturer.

**Application—
USG Decorative Finish System**

For drywall applications, SHEETROCK Brand Gypsum Panels should be hung in accordance with USG specifications.

SHEETROCK Brand Paper Reinforcement Tape should be applied to all joints, using any USG Joint Treatment System, followed by one cover coat of a USG joint compound product on all trims, nails, screws and joints (tapered joints, single wide width; butt joints, double wide width). Inside angles should be left with no additional coats of joint compound.

When joint compounds are set and dry, ridges, trowel marks and other waste material should be removed from the surface to provide a smooth surface for application of additional finish products. Wood trim, base, casings and cabinets should be installed and finished. All wood trim, cabinets and adjacent surfaces not to be plastered should be masked and covered to protect these surfaces from staining. Apply SHEETROCK Brand Wallcovering Primer to all joint compound-treated surfaces, to prevent uneven suction in these areas. USG Plaster Bonder—Clear should be next applied over the entire area to be treated, following the directions on the container.

The wall or ceiling is now ready for the mixing and application of USG Decorative Interior Finish. All areas should be free of direct air flow, to protect against dry-out of plaster prior to set. The application of finish is best achieved using a crew of five or six (four or five plasterers and one plaster tender), with each person contributing their full attention to a primary task and then falling behind to assist in each application and ultimately in the final unmasking and cleaning of entire area.

The USG Decorative Interior Finish usually consists of DIAMOND Brand Interior Finish mixed with colorants and water, but the following veneer plaster products can also be used: IMPERIAL Brand Basecoat Plaster, DIAMOND Brand Veneer Basecoat Plaster or IMPERIAL Brand Finish Plaster. Mixing is done in a five-gallon pail (14" high, 10 -1/4" bottom, 11 -1/4" top). Subsequent mixes are prepared to supply plasterers with material on a continuous basis. Water is added to each pail in a measured amount; 6-1/2" of water is required per batch mixed with DIAMOND Brand Interior Finish Plaster. Other veneer plaster products will require lesser amounts of water. The proper amount of water can be determined using a measured stick or measured container to help expedite the mixing process. Colorant is added to water using a predetermined COLORTREND® formula. Water and colorant should be mixed briefly to ensure uniformity. Slowly add approximately forty pounds of DIAMOND Brand Interior Finish, mixing for two to five minutes using a heavy-duty 450 RPM drill, with a cage-type paddle. The finish should be mixed to a slightly thicker than normal consistency, increasing or decreasing the amount of DIAMOND Brand Interior Finish accordingly. *It is important that all mixes are of the same consistency to ensure color uniformity throughout project.*

The initial application of the USG Decorative Interior Finish is done by one or more plasterers, who, depending on the size of the wall or ceiling to be treated, will work together to cover a large area, or will work separately on smaller surfaces. It is important that each wall or ceiling be covered in a continuous application, and that plasterers are careful to always continue joinings of separate mixes prior to either mix setting. Each wall and vaulted ceiling should be treated from top to bottom, and from angle to angle. Each ceiling should be treated from angle to angle in a consistent manner.

Many textures are possible using this system. Examples described here are a semi-smooth one-coat texture and a two-coat heavy texture; there are many other textures possible.

Work should be planned to provide efficient movement of labor and equipment from area to area. Work should begin on a ceiling at a chosen starting point and the ceiling should be plastered from angle to angle. For a one-coat semi-smooth texture, the plaster should be applied in short strokes of approximately three or four feet, in random directions, leaving lap marks and voids as desired, to a nominal thickness of 1/16" to 1/8". The entire substrate should be covered with this application.

The plaster should be left undisturbed at this point until it has taken up to a point where your finger will stay on the surface rather than sink into the plaster (approximately twenty minutes after initial application). The surface should now be drawn over lightly, with a clean, dry trowel, held almost flat to the surface. This should be done with short strokes in various directions, knocking down lap marks and bumps to the desired smoothness. The plaster should again be left undisturbed until initial set has started, (about forty-five minutes after initial application). The initial set is seen by a color change (or browning out) in various places on the plaster surface. At this time, the surface should again be drawn over lightly with a clean, dry trowel in various directions to further finish the surface. When the entire surface has set, a final trowelling should be done in the same manner as previously described.

For a two-coat heavy texture, the first coat of the finish should be applied to a nominal thickness of approximately 1/8" in the manner previously described, covering the entire surface, again using short strokes in cross directions. This coat should be left undisturbed, until it has taken up to a point where your finger will stay on the surface rather than sink in. At this point, it is time to apply the second coat of finish. This second coat should be applied with short strokes in random directions, leaving lap marks and voids as desired. These two coats should be applied to a total nominal thickness of 3/16" to 1/4". Additional drawing up and trowelling of finish should be done in the same manner as a one-coat semi-smooth finish. All tools and mixing equipment should be cleaned with water prior to material setting.

Once the surface is sufficiently dry, (approximately twenty-four hours after application), it is ready to receive USG Decorative Interior Finish Sealer. Prior to application of the sealer, the surface to be treated should be lightly sanded using 220 grit sanding mesh to remove any unnecessary irregularities and then wiped down with a damp cloth to remove excess dust on surface. During application of USG Decorative Interior Finish Sealer and for at least 48 hours thereafter, the air temperature must be at least 45 °F (7° C).

With proper moisture removal, the gypsum-based finish surface should be dry enough to apply the sealer in as little as 24 hours after its application. No obvious signs of wetness should exist on the gypsum-based finish surface.

USG Decorative Interior Finish Sealer comes ready to use. The product may be hand stirred prior to use to compensate for any settling. Never shake or box-mix, as this may entrap air bubbles. USG Decorative Interior Finish Sealer can be applied using brush, roller or spray equipment. When using low-pressure airless spray equipment, the product can be best applied using a tip no smaller than 0.015" or larger than 0.023". Hold the spray tip approximately 12-18" from the surface to be treated using a fanning motion at the end of each horizontal pass. Initially, USG Decorative Interior Finish Sealer's emulsified resin appears milky white. Depending on the porosity of the surface and the air temperature, the emulsified resin will eventually coalesce (fuse together) and dry clear and colorless. The milky appearance shouldn't last longer than about 30 minutes. When the appearance changes to clear, wipe off or roll-out any obvious drips and puddles remaining. After completing this stage, immediately recoat the surface as previously described. Mixing containers and tools should be cleaned after use, using warm water. Store any unused material in a tightly sealed container.

For applications over a gypsum veneer system, hang the IMPERIAL Brand Gypsum Base in accordance with USG specifications. Apply IMPERIAL Brand Glass Fiber Mesh Tape or SHEETROCK Brand Joint Tape, depending on application conditions. See PM-5 "Veneer Plaster Joint Reinforcement Systems" for more information. Apply one coat of IMPERIAL Brand Basecoat Plaster or DIAMOND Brand Veneer Basecoat Plaster; the surface should be left under the trowel. When set and dry, apply USG Plaster Bonder—Clear to the entire surface. Apply USG Decorative Interior Finish and USG Decorative Interior Finish Sealer as indicated above.

For more information about the USG Decorative Interior Finish System, see PM12, "Recommendations for Producing Colored Interior Walls and Ceilings."

Product Data

DIAMOND Brand Interior Finish Plaster (DIF)—Coverage (approximate): Conventional Walls and Ceilings			
Surface applied to	neat/smooth ft.²/ton	Sand float finish sanded 1:2 (sand: DIF)⁽¹⁾ ft.²/ton	Heavy texture finish sanded 1:1 (sand: DIF)⁽¹⁾ ft.²/ton
IMPERIAL Brand Gypsum Base	6000	4660	3500
IMPERIAL or DIAMOND Brand Basecoat	5500	4330	3250
Sanded RED TOP or STRUCTO-BASE Basecoat	5000	4000	3000
Monolithic concrete	5000	4000	3000

Electric Cable Heat Ceilings			
Surface applied to	Fill coat sanded 1:1 (sand: DIF)⁽¹⁾ ft.²/ton	1/16" finish coat sanded 1:4 (sand: DIF)⁽¹⁾ ft.²/ton	1/16" finish coat sanded 1:1 (sand: DIF)⁽¹⁾ ft.²/ton
IMPERIAL Brand Gypsum Base	2300 (3/16" thick)	5500	4500
Monolithic concrete	900 (5/16" thick)	5500	4500

(1) Coverage based on one ton of aggregated mixture (combined weight of sand and DIAMOND Brand Interior Finish Plaster).

Material: White, mill-prepared plaster finish.

Surface Hardness: 94 lbf. (418 N) required to depress a 10-mm dia. steel ball 0.01" (0.25 mm) into finish coat applied over veneer or sanded gypsum basecoat.

Compliance with Standards: Complies with ASTM C587 and Federal Specification SS-P-00402B, Type VI.

Warning: Store all IMPERIAL Brand Gypsum Base flat. Panels are heavy and can fall over, causing serious injury or death. Do not move unless authorized.

Dry Density: 72-76 lb./ft.² (1.18-1.24 kg/m²).

pH: 12.5.

Setting Time: 55 -75 minutes.

Addition of Aggregate: May be job-aggregated with up to 50 lb. (22.7 kg) of natural, uniform, graded, clean silica sand per 50 lb. (22.7 kg) DIAMOND Brand Interior Finish Plaster.

Storage: Store material in a cool, dry place. Avoid direct sunlight. Maintain temperature above 40 °F (4 °C).

Shelf Life: 3 to 6 months with proper storage.

Availability and Cost: DIAMOND Brand Interior Finish Plaster is distributed throughout the United States. Sanded, Type F and Type F-Sanded products are available in selected geographic areas. Contact a United States Gypsum Company sales office or sales person for additional information.

Packaging: DIAMOND Brand Interior Finish Plaster is available in 50-lb. (22.7 kg) bags.

Submittal Approvals:

Job Name	
Contractor	Date

Trademarks

The following trademarks used herein are owned by United States Gypsum or a related company: DIAMOND, DURABOND, IMPERIAL, RED TOP, SHEETROCK, STRUCTO-BASE and USG. COLORTREND is a trademark of Creanova Inc.

Note

Products described here may not be available in all geographic markets. Consult your U.S. 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.