

description and utility

The spectacular growth of gypsum wallboard's use in building is due largely to the development and improvement of joint-finishing methods. In order to present smooth, continuous surfaces in interior walls and ceilings, the joints between wallboard panels must be reinforced and concealed and fastener heads must be covered.

United States Gypsum was the originator of modern joint treatment, and through constant improvement its products have remained predominant in the field. PERF-A-TAPE* Joint Treatment products by U.S.G. have wider acceptance than all others for one reason: their over-all qualities produce the best, most uniform finished result.

Today's complete USG joint treatment line includes both ready-mixed and powder-type joint compounds, fiber reinforcing tape suitable for application by either hand tools or mechanical taping tools, new one-day joint system, special topping and concrete finishing compounds, and laminating adhesive. In addition to conventional joint finishing and fastener spotting (see "Types and Functions"), certain of these products are designed for repairing cracks, patching, spackling, back-blocking, and for laminating layers in gypsum wallboard double-layer systems.

In PERF-A-TAPE and DURABOND* Joint Systems, these qualities of superiority have been developed:

Excellent Bond—compound holds tight, providing secure bond between tape and face paper of wallboard.

Reduced Ridging—joints harden out smoother; low shrinkage and tight cohesion reduce sanding to minimum, allow faster preparation for decorating.

Smooth Working—easy mixing, excellent slip, ample wet mix life, and no alkali burning of paint.

In PERF-A-TAPE Reinforcing Tape, both comparative tests and long field usage have established these performance advantages:

Strength—greatest cross tensile strength, as strong as the board itself.

Crack Resistance—chamfered edges are wafer-thin for easy embedding, greater holding power to resist edge cracking.

Natural Bond—spark perforations prevent harmful air pockets and photographing; tape has least longitudinal stretch of all types tested; is pre-creased for easier folding.

Use of USG joint treatment brings the important added advantage of dealing with a single manufacturer who is responsible for all components of the finished wall or ceiling—gypsum wallboard, joint compound, reinforcing tape, drywall screws and adhesives, paints, metal studs and other steel accessories—all made by U.S.G. to *work together*.

SHEETROCK* Gypsum Wallboard and accessories are covered in USG Folder f-1876; use of joint treatment products in specific assemblies is treated in pertinent USG System Folders. USG Paint Products, including spackling and surface preparation materials, are covered in USG Folder f-1916.

general limitations

1. For interior use only; not intended for use on wood or wood fiber products (except in certain lamination applications—see PERF-A-TAPE Joint Compound below).
2. Bagged and cartoned products require protection against wetting.

USG® Drywall Joint Treatment Products

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1886



3. Each compound coat must be dry before next is applied, and completed joint treatment must be thoroughly dry before proceeding with decoration.

types and functions

PERF-A-TAPE Joint System consists of PERF-A-TAPE Compound (powder type) and PERF-A-TAPE Reinforcement (fiber tape), available either in one package or separately (below). For estimating purposes: for 1,000 sq. ft. of surface area to be finished, approximately 370 lin. ft. of PERF-A-TAPE Reinforcement and 50 lbs. of powder-type or 5 gals. of ready-mixed type PERF-A-TAPE Joint Compound are required.

PERF-A-TAPE Reinforcement is a strong fiber tape specially designed with chamfered edges feathered thin. Special cross-fibered paper has great strength both with the grain and against grain of paper. Many small random perforations allow rapid air escape during embedding. Highly crack resistant. Available in rolls.

Uses: outstanding performance when used with companion products for joint reinforcement on gypsum wallboards—either PERF-A-TAPE Joint Compound, USG All Purpose Ready-Mixed Joint Compound, or DURABOND One-Day Joint System.



PERF-A-TAPE Joint Compound is the standard of excellence among products used primarily for embedding tape, and the most widely used of all joint treatment preparations. Supplied in powder form, it has superior qualities of tight bonding, easy mixing, smooth working, edge and check crack resistance, outstanding durability. Special formula minimizes paint discoloration and discoloration from vapor and gas burner gases in air; no priming necessary with paints which have good resistance to suction differences.

Uses: for hand or mechanical application on interior joints, corners and fastener heads; should be followed by PERF-A-TAPE Topping Compound (below) for finishing. Used with PERF-A-TAPE Reinforcement in repairing cracks in plaster surfaces. Also recommended for spreader application as laminating compound in double-layer gypsum drywall and in laminating SHEETROCK® Wallboard to USG Sound Deadening Board; requires temporary nailing. Used as adhesive for backing blocks in USG Back-Blocking Joint Reinforcement System (see USG Folder a-1386).

PERF-A-TAPE Topping Compound is the companion product used for finishing over PERF-A-TAPE Joint Compound. Preferred for its smoothness, paintability and long working life. Latest improvements provide better slip and feathering, reduced shrinkage, easier sanding, and superior bonding. Has no "built in" factors to contribute to discoloration of paint from vapors or gases. Supplied in powder form, pigmented or unpigmented.

Uses: for second and third coat work, fine finishing of joints after reinforcing tape embedment; also for nailhead concealment. **Limitations:** not recommended for use in embedding.

USG All Purpose Ready-Mixed Joint Compound is widely specified because of uniform joint results it produces on the job. Comes pre-mixed, hence not subject to variation in mixture of water required for powder-type compounds. It has a creamy, lump-free plasticity that produces excellent slip and bond, extra-smooth embedding and finishing—latest improvement in an all-purpose ready-mixed product which was first introduced in 1954. Requires minimum sanding, eliminates contamination resulting from dirty water. Available in either machine or hand tool consistency. On-the-wall cost averages the same as with powder compounds.

Uses: excellent for embedding tape, smooth finished joints, nailhead spotting; used with PERF-A-TAPE Reinforcement in repairing cracks in interior plaster and masonry not subject to moisture. **Limitations:** container must be protected from freezing; not recommended for laminating in double-layer application of wallboard.

PERF-A-TAPE Ready-Mixed Topping Compound is a new product combining the high quality standards of a pre-mixed material with the properties required for fine finishing of joints. **Uses:** as a finishing coat over all joint compounds.

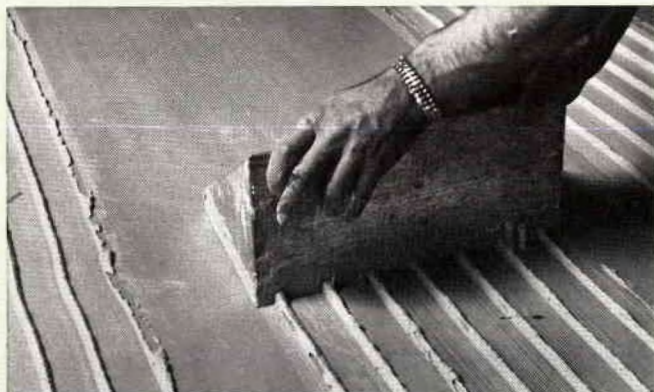
DURABOND® Joint Compound is the newest U.S.G. development to cut drying time—ideal for applications where faster finishing of gypsum drywall interiors and early occupancy are important. A powder product mixed with water, it chemically hardens in 3 to 4 hours, thus permits same-day finishing with DURABOND Topping Coat or USG Ready-Mixed Joint Compound and usually next-day decoration. Reduces mixing and clean-up time to result in lower applied costs than competitive one-day compounds—also produces better bond, fewer blisters, lower shrinkage. Suitable for hand or mechanical application; edge and check crack resistant.

Uses: for embedding PERF-A-TAPE Reinforcement and as first fill coat, also for concealing nailheads or screws. Used directly over DUR-A-BEAD® and PERF-A-BEAD® Corner Reinforcement (see USG Folder f-1876). **Limitation:** not to be used as finishing coat; must in all cases be completely covered with final application of DURABOND Topping Coat or USG All Purpose Ready-Mixed Joint Compound.

DURABOND Topping Coat is a new powdered vinyl finishing compound developed as the matching product for DURABOND Joint Compound. Substantially reduces cost of using one-day joint systems, normally ready for use immediately after mixing. Easily mixed by either manual or mechanical means, exceptionally smooth working, simplifies sanding.

Uses: as final or skim coat over DURABOND Joint Compound, and as alternate for this purpose to USG All Purpose Ready-Mixed Joint Compound. Ideal choice wherever slow drying conditions are prevalent.





USG® Laminating Adhesive is an improved type of dry powder adhesive for job laminating of double-layer gypsum drywall. Mixed with water, it provides an excellent bond and levels minor misalignments. Applied with notched hand spreader (illustrated above) or mechanical tool in ribbons of adhesive 2" apart, over entire back surface of face-layer board. Not a "contact" adhesive, it requires temporary nailing of prepared face layer to base layer.

Uses: for lamination of SHEETROCK® Gypsum Wallboard face panels to base layer of either SHEETROCK Wallboard or BAX-BORD® Gypsum Backing Board, in double-layer interior walls and ceilings. (Note: two other USG drywall adhesives are available for adhering gypsum wallboard directly to wood framing. See USG Folder f-1876 for SHEETROCK Brand DWA-14, and DWA-10 adhesives.)

COVER COAT is a new drywall compound for smoothing concrete surfaces located above grade. Supplied in ready-mixed form, easily applied with drywall tools in two or more coats. If surface is to be decorated, cover coat is followed with SHEETROCK Sealer or TEXOLITE primer-sealer.

Uses: for coating and finishing above-grade concrete ceilings and columns. **Limitations:** not to be applied over moist surfaces or surfaces likely to become moist (by condensation or otherwise), on ceiling areas below grade, on surfaces which project outside the building, or on other areas which might be subject to moisture, freezing, efflorescence, pitting or popping, movement, or other abnormal condition.

general joint treatment specifications

notes to architect

The following comments and recommendations cover the basic specifications for normal job requirements, and are intended as minimum guide specifications which can be adapted to specific projects and conditions.

Detailed specifications on joint treatment and adhesive application in the various partition and ceiling assemblies are covered in pertinent USG Systems Folders. Other related job conditions should be covered in the plans, details, or specifications.

I. scope—Unless otherwise indicated, all walls, partitions and ceilings are included. Furnish all labor and material necessary to reinforce and conceal all joints between gypsum wallboard panels in accordance with specifications and drawings. (If DUR-A-BEAD®, PERF-A-BEAD® or PERF-A-TRIM® corner reinforcement is specified)

furnish all labor and material required to finish all corners as may be shown on drawings.

II. general provisions—In cold weather, the building shall be heated sufficiently to maintain a uniform temperature in the range of 55° to 70° F. during joint treatment application, and adequate ventilation shall be provided when application is completed, either by means of opened windows or temporary circulators. When required, heat is to be furnished by (insert contractor's name here).

III. materials—All materials herein specified shall be manufactured by the United States Gypsum Company, and used in strict accordance with the manufacturer's directions.

a. Joint System shall be: PERF-A-TAPE Joint Reinforcement, PERF-A-TAPE Joint Compound and PERF-A-TAPE Topping Compound (pigmented) (unpigmented).

(As alternate to (a), use (b) and (c) following.)

b. Reinforcing Tape shall be: PERF-A-TAPE Reinforcement.

c. Joint Compound shall be:

(USG All Purpose Ready-Mixed Joint Compound—machine or hand tool consistency—Compound for embedding and fill coat, Topping for finishing)

(DURABOND® Joint System—Compound for embedding and fill coat, Topping for finishing)

(DURABOND Joint Compound for embedding and fill coat, USG All Purpose Ready-Mixed Joint Compound for finishing)

(PERF-A-TAPE Joint Compound for embedding, PERF-A-TAPE Topping Compound—pigmented or unpigmented—for fill and finishing)

d. Laminating Adhesive shall be:

(USG Laminating Adhesive)

(PERF-A-TAPE Joint Compound)

IV. application—joint compound

a. PERF-A-TAPE Joint Compound and Topping Compound shall be mixed and used in accordance with manufacturer's recommendations as shown on the bag. (USG All Purpose Ready-Mixed Joint Compound shall be used as it comes in original container.)

b. Wall and ceiling angles and inside vertical corner angles shall be reinforced with PERF-A-TAPE Reinforcement folded to conform to the adjoining surfaces and to form a straight, true angle. Using a suitable tool or machine, a thin uniform layer of PERF-A-TAPE Joint Compound embedding type, or USG All Purpose Ready-Mixed Joint Compound, approximately 3" wide, shall be applied under and over the tape in the angle joint to be reinforced. In angles and over all other joints to be reinforced, the PERF-A-TAPE Reinforcement shall be centered and seated into the compound, leaving sufficient compound under the tape to provide proper bond. A skim coat of compound shall be applied immediately after embedding tape. Excess compound shall be cleaned from the surface of the wallboard. After drying, embedding compounds shall be covered with fill coat of PERF-A-TAPE Topping Compound or USG All Purpose Ready-Mixed Joint Compound.

The final coat shall be spread evenly over and slightly beyond the edge of the preceding coat and feathered with a smooth uniform finish. All dimples at fastener heads shall receive three coats of compound in succession as used on the joints.

All coats shall be allowed to dry thoroughly (minimum of 24 hours) between each application of compound. All coats shall be sanded after each application has dried. The final coats and subsequent sanding shall leave all gypsum wallboard and treated areas uniformly smooth and ready to receive decoration.



USG Drywall Joint Treatment Products



1886

c. DURABOND Joint System shall be applied as specified for the PERF-A-TAPE system (IV, b, above) with the following exceptions:

DURABOND fill coat may be applied before either hardening or drying is complete in the embedding coat. (Fill coat also may be applied after the embedding coat is hardened.) After fully hardened (hardens in 3 to 4 hours), (DURABOND Topping Coat or USG All Purpose Ready-Mixed Joint Compound or PERF-A-TAPE Ready-Mixed Topping Compound) shall be used for the finishing coat.

d. (If DUR-A-BEAD* corner reinforcing is used) flanges of all DUR-A-BEAD metal corner reinforcing shall be concealed by at least two coats of compound. The first coat shall be (PERF-A-TAPE Joint Compound, DURABOND Joint Compound, or USG All Purpose Ready-Mixed Joint Compound). Second coat may be either PERF-A-TAPE Joint Compound or PERF-A-TAPE Topping Compound; DURABOND Topping Coat or PERF-A-TAPE All Purpose Ready-Mixed Compound. When completed, the compound shall extend approximately 8" to 10" on either side of the exposed metal nosing.

(If PERF-A-BEAD* corner reinforcing is used) PERF-A-BEAD shall be furnished, applied and concealed in accordance with the manufacturer's directions.

(If PERF-A-TRIM* is used) PERF-A-TRIM shall be finished in accordance with the manufacturer's directions.

*Reg. U.S. Pat. Off.

V. application—laminating adhesive

(USG Laminating Compound or PERF-A-TAPE Joint Compound embedding type) shall be applied in the prescribed manner to the back of face boards to be laminated. Face boards shall then be laminated to (base layer boards or coreboard) using temporary fasteners, shoring or weighting until adhesive is dry, to insure adequate bond.

See USG Folder f-1876 for specifications on other adhesives.

VI. application—COVER COAT

COVER COAT shall be applied to concrete (ceiling) (columns) before internal partitions are erected. All concrete surfaces to be coated shall be free of dirt, dust, grease and other contaminants. Any metal on the surface shall be coated with a rust preventative paint and allowed to dry.

Mixing, thinning and application shall follow manufacturer's directions. Irregularities in the surface shall be filled, chiseled or ground off as necessary to bring flush to concrete surface, prior to application of first coat. Surface shall be sanded after each coat has dried for at least 24 hours. Sufficient coats shall be applied to obtain acceptable result.

Angles formed between top of partitions and ceiling shall be finished with (PERF-A-TAPE Joint System) (DURABOND Joint System) (USG All Purpose Ready-Mixed Joint Compound). Where further decoration is required, surface shall be sealed with (SHEETROCK Sealer) (TEXOLITE Primer-Sealer).

a. On concrete columns, PERF-A-BEAD Corner Reinforcement shall be applied to angles and corners where required, while first coat of COVER COAT is still wet and fluid. PERF-A-BEAD shall be applied according to manufacturer's directions, and both flanges shall be covered with a smooth fill of COVER COAT 3" to 4" wide.

TRADEMARKS: The following trademarks are owned and/or registered in the U.S. Patent Office by United States Gypsum Company, and are used throughout this catalog to designate particular products manufactured by that company: USG (joint compounds, adhesives, paints, fiberboards); PERF-A-TAPE and DURABOND (joint treatment); DUR-A-BEAD, PERF-A-BEAD, PERF-A-TRIM (corner reinforcement); SHEETROCK (gypsum wallboard and adhesives); BAXBORD (gypsum backing board); TEXOLITE (paint products); COVER COAT (compound).

NOTE: Since methods and conditions of application and use are beyond our control, the United States Gypsum Company will not be responsible for failure of its products when not used according to our directions and specifications.

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f-1886



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