PLAINTIFF'S EXHIBIT
USG-1791

mixing—*not* water to powder. And sift compounds while pouring.

DO—apply compounds of heavy consistency over fasteners, metal trim and beads.

DO—keep tools and mixing containers clean at all times. Always use clean water for mixing.

DO—apply 3 coats for finest results.

DO—apply relatively thin coats in angles to prevent corner cracking.

DO—exercise special care when using DURABOND Compounds with mechanical equipment. Tool cleanup and careful work scheduling, governed by compound hardening times, are especially important.

DON'T—use drill-type mixers with speeds higher than 600 RPM. Excessive mixing speed whips air into compounds and accelerates hardening action of DURABOND Compounds.

DO—choose DURABOND 90 and SHEETROCK SW Gypsum Wallboard for the strongest joints, the smoothest interior walls and ceilings.

DURABOND COMPOUNDS AS A LAMINATING ADHESIVE

Gypsum Wallboard to Gypsum Wallboard

For superior bonding, DURABOND Joint Compounds may be substituted wherever PERF-A-TAPE Joint Compound-Taping is specified. Application is identical; however, schedules must be adjusted because DURABOND Compounds harden by chemical action, and application must be completed before hardening begins. (Refer to U.S.G. Drywall Construction Handbook, WB-52, for general laminating directions.)

Gypsum Wallboard to Above-Grade Masonry

DURABOND Joint Compounds are excellent adhesives for laminating gypsum wallboard to above-grade concrete block or masonry.

Surface Preparation—Concrete surface must be straight and without localized projections that exceed ⅛". Larger projections must be removed. Depressions larger than 4" in diameter and greater than ⅛" in depth must be filled with masonry mortar or DURABOND Compound sanded 1:1, by volume. Surface also must be clean—free of dust, dirt, oil and loose particles.

Wallboard Preparation—Plan panel layout for vertical application. Measure and cut to required length sufficient panels to cover entire wall.

Mixing—Using a clean, smooth-sided container or drum, mix DURABOND Compound with an equal volume of clean sand conforming to ASTM C35. Batch should be large enough to laminate all of the prepared panels, providing batch size does not exceed 25 lbs. of combined DURABOND and sand. Place water, ½ pt. per lb. of DURABOND Compound, into container first. With mixer turning slowly, add DURABOND and sand. Mix 1 to 2 minutes, or until all lumps are dispersed, with a heavy-duty drill and cage type paddle.

Installation — Spot-apply adhesive over entire panel. Spots should be 2" to 3" across, ½" to ¾" high, and about 12" apart in staggered rows. Spots around perimeter should be kept 1" away from edge of panel.

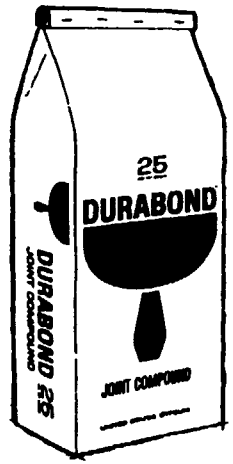
Place panel vertically against masonry. Press firmly in place to level panel and insure good bond. Shift panel vertically or horizontally to align. When placed, aligned and shimmed at floor line, anchor temporarily with wood cleats at ceiling *and floor*. Hold abutting panels in alignment at third points (quarter points for ceiling heights over 8') with masonry nails driven through the wallboard, or cleats, and into the masonry. Exercise caution when driving all temporary nails to avoid moving panels, which impairs adhesive bond.

Finishing—Cleats should remain undisturbed overnight. Allow at least 24 hours before attaching trim, control joints, base, etc., or before treating joints.

GENERAL PROVISIONS

DURABOND, like other powder joint compounds, is affected by aging. Dealers and applicators should rotate stocks of DURABOND-Taping, DURABOND 90 and DURABOND XL Joint Compound, and store them in dry places.

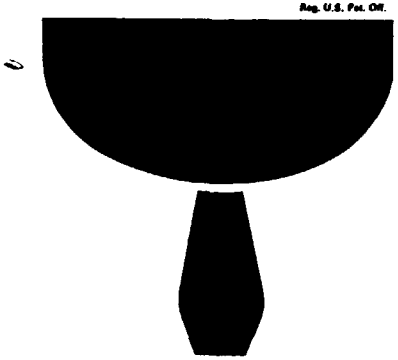
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JOINT SYSTEM

a product of UNITED STATES GYPSUM

CS011 2208

DURABOND JOINT SYSTEMS

. . . a family of polyindurate (extremely hard) powder compounds used with vinyl-base ready-mixed formulations for "one-day" joint finishing over interior and exterior surfaces

DURABOND INTERIOR JOINT SYSTEM

DURABOND JOINT COMPOUND-TAPING

A polyindurate material for embedding tape and metal accessories; also ideal for heavy fills since it chemically hardens in 2 to 4 hours. Virtually unaffected by high humidity and changes in humidity. Produces exceptionally strong, low-shrinkage joints with SHEETROCK® Gypsum Wallboard.

Since DURABOND Joint Compound-Taping and DURABOND 90 are formulated for maximum strength and hardness, they are extremely difficult to sand and are not generally recommended for finish coats. However, exceptionally skilled mechanics using these compounds can produce smooth, acceptable joints without sanding. Mechanics who are accustomed to sanding will achieve better results using USG® Joint Compound-Topping or All Purpose, or USG Ready-Mixed Joint Compound-Topping or All Purpose as a finish coat.

DURABOND 90 JOINT COMPOUND

A polyindurate material having the physical properties of DURABOND Compound-Taping plus the added advantage of fast hardening time—only 2 over 2 hours. DURABOND 90 is the recommended joint compound for rounded-edge SHEETROCK SW Wallboard—a method that produces the strongest, smoothest drywall joints yet developed. Ridging is virtually eliminated.

The fast hardening time of DURABOND 90 makes it even ideal alternate to DURABOND Joint Compound-Taping where quicker finishing and even less shrinkage are desired.

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USG READY-MIXED JOINT COMPOUND—ALL PURPOSE OR TOPPING

Vinyl-base formulations, pre-mixed to a creamy lump-free plasticity with excellent slip and bonding strength. Available in either machine or hand tool consistency. Ready-Mixed can be thinned with water if container consistency is too stiff to suit personal preference. Contents of opened containers of Ready-Mixed can be held in wet mix for prolonged periods by covering surface of compound with water.

DURABOND EXTERIOR JOINT SYSTEM

DURABOND XL JOINT COMPOUND

A polyindurate joint treatment formulation in powder form for prefilling, embedding tape and finishing joints of USG® Exterior Gypsum Ceiling Board—also for pre-filling holes in board surfaces, embedding and filling metal accessories and fastener heads. Unlike other DURABOND Compounds, DURABOND XL is formulated for all three joint-treatment coats—embedding, filling and finishing. However, each coat must be applied with professional smoothness in order to avoid sanding.

DURABOND XL provides the finest qualities of bonding strength, low shrinkage, and weather resistance currently available. It can be applied and dried at temperatures as low as 35°F.

DURABOND XL Compound and the USG Exterior Gypsum Ceiling Board system can be used for all exterior ceilings not directly exposed to the weather.

WHY DURABOND JOINT COMPOUNDS ARE SUPERIOR

Among the qualities desired in good joint compounds, DURABOND products excel in—

BONDING STRENGTH—DURABOND Joint Compound bond increases as its dries. Once hardened and dry, the bond of DURABOND Compounds far surpasses that of conventional compounds.

MIXING EASE—DURABOND Compounds mix easily—just add to water and stir into solution. Mix can be applied immediately.

SHRINKAGE RESISTANCE—Unlike conventional drying type compounds, delayed shrinkage does not occur with DURABOND. These compounds tolerate moderate amounts of excess water, which would otherwise cause shrinkage. *Initial* shrinkage may occur, however, if DURABOND Compounds are allowed to dry before hardening takes place. This condition usually results from exposing unhardened joints to rapidly moving dry air.

HUMIDITY RESISTANCE—DURABOND Joint Compounds feature chemically controlled hardening. Hardening rates are virtually unaffected by changes in humidity, or by high humidity.

EDGE CRACK RESISTANCE—DURABOND Compounds have excellent resistance to edge cracking.

FINISHED SMOOTHNESS—The surfaces of DURABOND finished joints are extremely smooth and tight; skilled applicators can, without sanding, provide acceptable finished joints. For regular daily practice, however, USG Ready-Mixed Compounds are recommended for interior finish coats.

The combined benefits that accrue from use of DURABOND Compounds result in tangible labor and material cost reductions. And, DURABOND one-day finishing assures earlier completion.

DIRECTIONS FOR APPLICATION

MIXING

Mix DURABOND Joint Compounds in a clean 5-gal. plastic container. Plastic is preferred for ease of cleaning. Flexing the sides and bottoms of plastic containers quickly loosens hardened compound left from a previous batch. A quick wash removes remaining compound. Metal containers do not clean easily—often require scraping to completely dislodge all hardened compound trapped around the bottom seam.

Sift powered compound into drinkable water while stirring. Mix vigorously with a commercial potato masher for about 2 minutes, or until powder is thoroughly wet. Allow to soak a few minutes, then re-mix to a smooth consistency.

DURABOND Compounds can be power-mixed. Use a cage-type paddle in a ½" electric drill turning 300 to 400 RPM under load (do not mix at speeds exceeding 600 RPM). Follow same procedures as for hand mixing.

WATER PROPORTIONS (APPROX.) PER 25-LB. BAG OF DURABOND COMPOUND

DURABOND Compound-Taping and DURABOND 90

Hand Tool Application	13 to 14 pints
Mechanical Fill Coat	15 to 16 pints

DURABOND XL Compound

Hand Tool Application	13½ to 14 pints
Mechanical Fill Coat	14½ to 15 pints

Do not mix greater quantities of DURABOND Compounds that can be used before the compounds harden.

	Hardening time	*Safe working time*
DURABOND-Taping	*2 to 4 hrs.*	*2 hrs.*
DURABOND 90	1 to 2 hrs.	1 hr.
DURABOND XL	90 to 60 min.	30 min.

Do not allow DURABOND Compounds to be contaminated with other materials—especially other types of joint compounds, or even other previously mixed DURABOND Compounds. Never use dirty mixing water (such as used for cleaning tools).

Do not attempt to hold DURABOND Compounds in wet mix by covering with water. Compounds harden chemically, even when under water. For the same reason, do not immerse mixing tools in water for later cleaning—*clean tools immediately.*

Do not retemper mix.

Do not mix or apply DURABOND Compounds at temperatures below recommended minimums For DURABOND-Taping and DURABOND 90, safe minimum temperature is 55°F. Raising the temperature of powders to 70°F. just before mixing, and use of warm water yield best results.

DURABOND XL can be mixed safely at temperatures as low as 35°F.

APPLICATION—DURABOND INTERIOR JOINT SYSTEM

1A. *For SHEETROCK SW Wallboard.*
Pre-fill joint between SHEETROCK SW panels with DURABOND 90 Joint Compound. Apply compound directly over "V" groove using a flexible 5" or 6" joint finishing knife. Wipe off excess compound applied beyond groove. Allow pre-fill to harden before embedding tape.

Embed PEAR-A-TAPE® Reinforcement with DURABOND Joint Compound-Taping or DURABOND 90, when compound hardens, immediately apply fill coat of either type compound using joint knife or mechanical flat finisher.

1B. *For Tapered-Edge SHEETROCK Wallboard.*
Butter joints between SHEETROCK panels with DURABOND Compound-Taping or DURABOND 90, then using a flexible 5" or 6" joint finishing knife, embed tape. When compound hardens, immediately apply a fill coat of either type compound.

For Either Type Wallboard

2. Butter and tape all interior angles; when compound hardens, immediately apply a fill coat of either type compound using joint knife or mechanical corner finishing tool.

3. Spot all fastener heads with DURABOND Joint Compound.

4. Apply DURABOND Compound over DUR-A-BEAD® Metal Reinforcement. For minimum shrinkage over reinforcement and nails, use Taping Compound mixed 1½ hours, or DURABOND 90 mixed 45 minutes previously.

5. After fill (second) coat has hardened, apply finishing coat of USG Ready-Mixed Compound-Topping or All Purpose. Completely cover all joints, angles, corner beads and fasteners.

Note: *If job is to be completed in one day,* all second coat applications should be completed by the noon-hour break. This requires planning and scheduling to match hardening times of DURABOND Compounds used.

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