

PAOLI, PENNSYLVANIA

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To: All Regional Sales Managers
All Area Sales Managers
All Salesmen

General Sales Bulletin #104-65

Subject: "Nail Popping"
"Beading or Ridging"

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FILE - Gypsum Wallboard Product Manual #1
Section - 6-A

Attached is one (1) copy each of the two reference articles concerning two conditions that exist or are caused by various conditions including working conditions in gypsum wallboard construction assemblies.

The conditions are:

1. Nail Popping
2. Beading or Ridging

Please read and file the two articles in your Gypsum Wallboard Products Manual #1.

(see attached sheets)

"NAIL POPPING"

Nail popping is a term used loosely to describe several conditions. In some instances, it appears as a blister over the nail and the condition is further magnified with angular lighting. In other cases it may just be a crack outlining the nail head. In extreme cases, the loose cement will fall, exposing the nail head.

Causes of Nail Pops

1 - Nail Popping is caused by wet lumber which shrinks and twists in drying.

2 - Improper nailing procedures or improper nails tend to aggravate nail popping.

3 - Irregularities created in framing when gypsum wallboard is not erected in straight, true planes. This condition is aggravated by "loose" nailing.

To Prevent Nail Pops

1 - Framing procedures should follow American Standards Association (A.S.A.) specifications and American Society for Testing Materials (A.S.T.M.) specifications. Follow FHA requirements on grading, maximum moisture content and framing details.

2 - Gypsum Wallboard Application

A - Stock gypsum wallboard flat on jobs - Refer to the Gypsum Association Recommendations for storing and handling of gypsum wallboard.

B - Follow correct application of gypsum wallboard in accordance with A.S.A. A97.1 specifications for nails and nail spacing.

C - Use the proper tools for the application of gypsum wallboard and nails.

D - Float gypsum wallboard in angles, by omiting corner fastener in both the ceiling and sidewall angles. Along the ceiling, the nearest fastener is 7" from the angle and 8" from the angle along the wall. In vertical corners only nail overlapping board to avoid nailing in corners.

To Eliminate Nail Pops

Bestwall recommends three methods for applying gypsum wallboard to eliminate nail popping:

1 - Bestwall Two-Ply Lamination (Bestwall Literature BW-62380) - Applying a full layer of gypsum wallboard by laminating over a gypsum backer board, fastened to conventional framing (wood or metal) and eliminating fasteners in the face layer.

2 - Bestwall Strip Lamination (Bestwall Literature BW-62385) applying gypsum wallboard by laminating a face layer over gypsum strips over conventional framing (wood or metal)

3 - Bestwall Semi-Solid Laminated Gypsum Partitions (Bestwall Literature BW-62390) Applying gypsum wallboard by laminating each side of gypsum ribs on studs, thus eliminating the conventional framing and requiring less fasteners in the face board.

"BEADING OR RIDGING"

Beading or ridging is a joint condition that occurs over taped and finished joints, generally in the center. It appears as a raised section following along the joint of two pieces of gypsum wallboard. Sometimes it can only be seen under tangential lighting. At times the condition is confused with joint shadowing which, strictly speaking, is usually a decoration problem. Beading or ridging may appear on ceilings and walls.

The causes of beading and ridging do not necessarily show weakness in conventional methods for treating the joints with joint treatment compounds. Joint beading or ridging occurs from time to time with all manufacturers' materials in practically all markets.

Weather conditions, framing methods and application of gypsum wallboard may all contribute to beading or ridging.

The Bestwall Gypsum Division of the Georgia-Pacific Corporation and the Industry have established specifications for the application and finishing of gypsum wallboard and cover essentials in framing details which eliminate or reduce the problem.

Causes of Beading or Ridging

1 - Wet or Green lumber will twist, warp and shrink as it dries. This causes movement and may cause beading.

2 - Dampness or cold weather during the application of joint compound plus lack of heat in the building during the application of joint treatment compounds results in delayed shrinkage and this can cause a ridge or bead. Poor ventilation or failure to allow sufficient drying time (may be 2 weeks if weather is humid) between applications of joint compound or before decorating will cause delayed shrinkage and can cause a bead or ridge.

3 - Poor application of the framing prevents the gypsum wallboard from being nailed securely to the framing.

4 - A cut edge of gypsum wallboard butted to a tapered edge requires more joint compound on one side of the joint and results in unequal shrinkage, and may subsequently show beading or ridging.

5 - When large gaps are left between edges during application of gypsum wallboard, excessive amounts of joint compound are required to fill and level the joints. Excessive applications of joint compound will shrink unevenly causing a bead.

6 - Improper stocking of gypsum wallboard on the job may cause warped board. Application of warped gypsum wallboard will cause uneven board alignment subsequently preventing the correct application of joint treatment products.

7 - Unsatisfactory or incomplete bond of tape may cause beading or ridging.

8 - Rough handling of gypsum wallboard damages edges and these may contribute to beading or ridging.

Repairing Beading or Ridging

Beads or ridges can be repaired by first making sure that all gypsum wallboard is securely fastened to the framing. Previously applied joint compound should be dry.

Applying Bestwall Finishing Compound on each side of the ridge on bead, extending the compound 5" to 10" from the ridge or bead, but not covering the ridge. Allow the compound to dry and apply a second coat of Bestwall Finishing Compound covering the ridge and the surfaces on each side of the ridge, feathering the edges. Allow the finishing compound to dry and decorate in manner desired.

To Reduce or Minimize Beading or Ridging

1 - Framing should be plumb and straight and this will assist in the correct application of gypsum wallboard.

2 - Bestwall One-Day Wallboard Joint Compound makes possible the taping and finishing of all wallboard joints, nail or screw bevels and corner beads within a single day. This product sets and hardens in $2\frac{1}{2}$ to 3 hours - no delayed shrinkage thereby minimizing beading. Fill large joints with Bestwall One-Day Compound.

3 - Use sufficient Joint Compound under the tape to insure good bond to the gypsum wallboard. Allow sufficient drying time between successive applications of Bestwall Joint Compounds.

4 - In cold weather, humid or damp conditions, provide heat and ventilation and allow successive applications of joint treatment compound to dry thoroughly, one or two days if necessary, before applying successive applications of Bestwall Joint Finishing Compound.

5 - Refer to the Gypsum Association Information Bulletin entitled, "Recommendation for Storing and Handling of Gypsum Wallboard".

To Eliminate Beading or Ridging

Bestwall recommends three original methods for applying gypsum wallboard by lamination to eliminate beading or ridging.

1 - Bestwall Two-Ply Gypsum Lamination (Bestwall Literature BW-62380) applying a face layer of gypsum wallboard, by lamination, over a gypsum backer board, fastened to conventional framing (wood or metal) and eliminating fasteners in the face layer.

2 - Bestwall Strip Lamination (Bestwall Literature BW-62385) applying gypsum wallboard, by laminating a face layer over gypsum strips, over conventional framing, (wood or metal).

3 - Bestwall Semi-Solid Laminated Gypsum Partition (Bestwall Literature BW-62390) applying gypsum wallboard by lamination, each side of gypsum ribs or studs, thus eliminating the conventional framing and requiring less fasteners in the face board.