



Technical Bulletin

SPRAYING ACOUSTIC CEILINGS- PROBLEMS AND SOLUTIONS

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Today it is more the norm than the exception in new home construction for the ceilings to be given that "modern" look of sprayed-on acoustic ceilings. And older homes that are without it are increasingly having acoustic blown on their ceilings.

Even though sprayed-on acoustic ceilings seem to have come of age, there are critics who say its advantages do not outweigh its disadvantages. Let's address this question and consider the advantages and the problems associated with blown acoustics.

One advantage, at least to most, is its esthetic value. It looks nice and provides a good contrast to wall textures, paneling, or wallpaper. It brightens rooms and gives the appearance of enlarging them. Also, in the initial construction costs both time and money are saved. The blown acoustic can hide a multitude of sins in the drywall taping and floating and generally requires less ceiling preparation. Homebuilders have also found blown acoustic to be a good selling point for their new homes.

In new home construction, practically all of the acoustic is actually a simulated product rather than a functional acoustic. Normally, the advantages of a functional acoustic over a simulated acoustic do not seem to warrant the difference in cost. The finished appearance is about the same, with the main difference being in sound ratings and flame-spread ratings. But the problems associated with its application are about the same, so the suggestions will for the most part apply to both.

On average, blown acoustic ceilings are either spray painted or re-blown every 12 to 15 years. Of course this average can vary greatly, depending on the type of heating used, how clean the filters are kept, whether the homeowners smoke or not, etc. The choice of whether to spray paint or re-blow acoustic depends on the condition of the ceiling. But when it does require a repair job or just whitening up, it usually becomes apparent to the average homeowner that a competent contractor is needed to do a professional job.

For many contractors accustomed to new home construction, the prospect of re-blowing an existing ceiling, with the people living in the home, can be a veritable nightmare. And, to the dismay of both the contractor and the homeowner, it sometimes becomes one when the contractor fails in the most important aspect of re-blowing acoustic ceilings – the masking!

Two-thirds of the time allotted for the job will usually be spent on masking. Often a combination of masking paper, 1 mil plastic, and canvas drop cloths is used. Some contractors have substituted plastic for the canvas drop cloths, thus eliminating the need to vacuum the dust that accumulates on the canvas drops and then falls on the carpets.

Proper masking techniques cannot be overemphasized. If great care is not taken in the masking process, the end result may cause the homeowner to lose sight of the fine job done on the ceiling due to the mess, which has smeared on the rest of the room and its contents. It is the prudent contractor who realizes the success or failure of most jobs.

Another problem that plagues contractors spraying acoustic is that of discoloration. This is a common complaint, but with an easy solution, compared to having to go back and respray the ceilings.

There can be several causes for a discolored ceiling but these can be identified easily. Circular rust-colored stains or rust-colored joints may indicate leaky plumbing or a bad roof. Solution? Seal with a white-pigmented shellac and respray. This sealing process is recommended on old plaster ceilings even though no stains are visible. Even very old water stains could leach through if the ceiling was painted with a water-based paint.

But in speaking about ceiling discoloration, by far the most common problem is a difference between the joints and the field of the board on drywall ceilings. This problem has been referred to as "photographing," "burning through," "banding," or a "bleedthrough." For a long time no one really knew why the problem occurred. Though many blamed it on faulty material. But that was like betting against the house. It seldom was the reason.

To find the reason for the problem, Hamilton Materials of Orange, California commissioned National Testing Standards Inc. laboratories to do a series of tests.

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They filed the results of these tests on August 28, 1979 with Hamilton Materials. Hamilton ceiling texture as well as USG ceiling texture had been applied to individual pieces of wallboard. Each of the sampled coatings was dis-colored by the wallboard. The question was why. The report concluded, "The most probable cause for the discolorations of the textured coatings is that the wallboard paper contains organic sulfates such as lignin, tannins and gluosides which are water soluble and can be leached into the wet textured coatings as the solvent system evaporates." The report also noted, "any conditions which would enhance slow drying would aggravate this situation; i.e., high humidity, poor ventilations, etc."

With this information at hand, how can the ceiling contractor correct the problem – or better yet, prevent it? To answer the question, Hamilton Materials sent a letter to its customers on the subject "Color Differential Between Joints and Field of Board on Textured Drywall Ceilings." This letter reflects the thinking of most ceiling texture manufactures concerning the application recommendations. The letter stated, "the only real solution to the problem is to seal the entire ceiling surface prior to the application of texture. This has been a recommended procedure for several years but has not been followed in actual job practice. With this new evidence and the magnitude of problems being encountered, it would seem almost mandatory that the recommended sealing operation be made a standard procedure in the drywall finishing process."

The type of sealer used may vary with the needs of each job, but usually a pigmented shellac or an alkyd-based sealer is recommended. It would be well to check with the manufacturer of the ceiling texture you use as most of them will not guarantee the product unless the surface is sealed first.

As commented on previously, many contractors have failed to follow manufacturers' recommended procedures. Perhaps this is due to strong competition, or just a gambling nature on the part of the contractor. But in light of information presented it would seem that the competent contractor would follow these recommendations whenever possible.

So whether the contractor is blowing acoustic in the initial construction of a home, or years later, if the common-sense suggestions and manufacturer' recommendations are followed the contractor will be "cents" ahead.