

**Johns-Manville
Sales Corporation**

Industrial Insulations Division

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PLAINTIFF'S
EXHIBIT

12545.00

October 8, 1971

Hopeman Bros.
156 East 46th Street
New York, New York

Attention: Mr. F. X. Gordon

Dear Sir:

COLOR MARINE VENEER
COLOR VARIATION - FOAM WHITE
LASH PROGRAM

In line with our conversation the other day in which we discussed the variation in the shade of this product, we had our Nashua Plant break down its manufacturing process which helps explain to a further degree the very nature of this material.

This is confidential information. But we value our long standing relationship with your company and fully appreciate the concern you have for your customers.

Some color or shade variation must be expected in any asbestos-cement product. CMV, foam white, is such a product and these reasons will explain these occurrences.

(1) Raw Materials

- a. Asbestos fibre, as supplied to the Nashua plant, is a natural material subject to some differences in composition.
- b. White cement and titanium dioxide may have slight color differences inherent in their manufacture.
- c. Silica is a mined material likely to contain considerable color differences. Each incoming shipment is carefully checked for color compared to approved samples, but a certain range of color is inevitable within the limits of acceptance.

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(2) Manufacturing Process

- a. Wet machine - Dry mixing water temperature, slurry consistency, felt condition, forming roll pressure, and rate of formation are some of the variables we have to control in operating the wet machine--any of which can conceivably alter the color of the end product to some degree.
- b. Repressing - Machine variation of the repress can lead to density variation - a likely cause of color difference.
- c. Curing - Air cure, autoclaving, and oven drying are controlled within process limits but are not perfect. When combined with raw material variations, curing becomes a possible source of color problems.

(2) Manufacturing Process (Cont'd.)

- d. Finishing - Slight sanding differences (due to belt wear and pressure), within specifications, and the application of lacquer to sheets of slightly different receptivity, are also possible sources which may emphasize color variation.

Recognizing that color variation in Foam White CMV is inevitable, special care is taken in inspection to separate off shade sheets. In this way all sheets inspected at one time are an acceptable commercial color match and the sheets in any pallet will all match. However, a progressive shade variation may occur during a run which would not be evident at the inspection operation, when sheets from the first part of such a run are later butted to sheets from the end of that run, a shade difference would be present. This same variation probably would not be perceptible during the erection period.

One last point, when working with asbestos cement sheets, past experience has shown that with ageing, a blending of the material occurs, that minimizes a difference in shading.

We hope this information helps you to more fully understand the shade variation inherent with such a product.

Very truly yours,


F. F. Coggins
Marine Product Manager



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