

Trade Sales
Color Conditioning Dado Enamels
50 Line
IN Resins
Release Letter #949

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MEMORANDUM REPORT #18-49:

COLOR CONDITIONING DADO ENAMELS

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This memorandum report covers work completed under investigation #18-38 which requested the formulation of the Color Conditioning Dado Enamels using a pentaerythritol resin. The new line has been successfully formulated and 100 gallon plant batches of two of the more popular colors have been satisfactorily manufactured. Release Letter #949 has been issued to cover the new products.

Details of Development:

It was decided to model the Color Conditioning Dado Enamels along the lines of our PE/linseed alkyd Brush Duco Colors, that is, at the same pigment volume but at slightly lower hiding. Also, in order to reduce cost, we decided to use LO TiCal (W-54) as the prime pigment.

In our first attempt at formulation, we used FRO-P-47621, a PE/linseed alkyd resin, 55% oil at 60% solids, and based on the total mill base, 0.2% Neo-Fat (N-555) as a flocculating agent. This product was considered satisfactory for hiding, gloss, dry, and brushing properties but displayed too much flow and a tendency toward sagging. After a series of experiments to determine the most efficient flocculating agent, we decided to use 5% aluminum stearate gel or approximately 0.55% dry aluminum stearate on the mill base. Our final product, P-58-P-56441, containing 1.85 lbs. oil per gallon and 2.24 lbs. TiCal per gallon (0.67 lbs. TiO_2 per gallon) at 20% pigment volume and 60% total solids, was considered satisfactory for all film properties.

In selecting the pigments used for tinting the white to the various colors in the line, we used only our most alkali proof pigments. Laboratory tests have proven our new formulations to be greatly superior to the previous orthodox products in their ability to resist discoloration to both water and mild alkali solutions. Another item of importance in the new line is the improvement in flooding resistance. This is especially true in the blues and grays.

Briefly summarizing the comparison between the new line and the orthodox, they are equal in hiding, overnight dry, ease of brushing, initial gloss, flow and sag resistance. The new PE line is superior in general durability, hard dry, color, and gloss retention.

tion and flooding resistance, and is greatly superior in both water and alkali resistance. Can stability, while limited at present to approximately three months, is satisfactory.

Notes and information on all work done in the formulation of the PE/linseed alkyl Color Conditioning Dado Emulsion is contained in Laboratory Notebook #3012.

PHILADELPHIA LABORATORY

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