

cc: Mr. J. V. Eunn, Cleveland

Chicago

Auxiliary Research

PC and C

Sales

New York

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J. K. Egeler

- Lithopons -
New Titanium Type Pigment

Since answering your letter of September 18th yesterday, I have received from Mr. Kehr National Lead's Technical Service Report on Latex Paints. A few quotes might help to clarify some of the thinking here.

In speaking of the "inroads that latex paints may be expected to make into the field of interior trade sales finishes", the article indicates that "Two factors have probably already combined to reduce the original impetus of this new development: the curtailment of the civilian use of styrene (one manufacturer reports that the production of latices for paint has already been reduced by 50% and that further cuts may be in the offing) and the availability of titanium pigment. The effect of the titanium pigment situation may not be at first apparent - since one type of finish would be merely replacing another. However, practically all of the latex paints now being produced are based upon a pigmentation of rutile titanium dioxide to obtain all of the hiding power possible at the low P.V.C.'s at which they are formulated, while the flat wall paints which they are intended to replace are normally pigmented with the calcium-base pigments. Any large swing toward the use of latex paints would, therefore, result in a decrease in the use of "TITANOX" RCHT and a corresponding increase in the use of straight titanium."

"It is generally believed by the manufacturers of latex vehicles that calcium base pigments cannot be used in their pigmentation because of the coagulating effect of the calcium ion and they have so informed the manufacturers of latex paints. However, on the basis of our own laboratory work, this is a misconception. "TITANOX" RCHT can be used in the pigmentation of latex paints. The calcium ions resulting from the very slight solubility of the calcium sulphate base do not react with butadiene; they certainly do not react with poly-styrene; they can only react with the water-soluble soaps and protective colloids used to stabilize the latex during its original manufacture. Hence it is only necessary to provide a calcium-insensitive emulsifying agent and a calcium-insensitive protective colloid to produce a calcium insensitive latex! It will be remembered that, only a few years ago, it was also considered impossible to use calcium-base pigments in emulsion paints. Now it is commonplace - and there is no reason why these economical pigments should not become just as widely used in latex formulations."

"TITANOX" RCHT has been used in the pigmentation of latex paints and we believe that such paints have distinct advantages over those now commercially produced using a titanium dioxide pigmentation."

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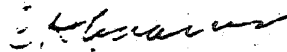
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The calcium-insensitive protective colloid which is mentioned above is starch, or methyl cellulose. This is to be used in conjunction with a calcium-insensitive emulsifying agent.

We doubt very much that the statement that "calcium-base pigments used in emulsion paints is now commonplace" is correct, if they refer to calcium sulfate. We all know, of course, that calcium carbonate may be used. I do not know how good the quality of these non-protein latex paints is in comparison to the protein type, like Super Kem-Tone, but, as the Emulsion Department has frequently indicated, it is only "alleged" that they can make a satisfactory latex paint with starch, or without protein.

As I previously indicated, if you get any additional information on this other than what is contained in their Technical Service Report on Latex Paint, which, incidentally, was written by a Mr. F. S. Stieg, and dated January, 1951, I should like to receive a copy.

Also, as I indicated, we may have to do some work on these paints in comparison to the regular latex paints containing protein and lithopone to pick out their weaknesses.



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