

Progress Report

MacGregor Quick Process White Lead

September 1, 1938

Statement:

This report supplements the report issued March 8, 1938, entitled "Problem HS/DD/HT 666, Final Report, Section II, March 8, 1938." In this report it was established that the MacGregor lead shipment received, had a Carbonate-Hydrate ratio corresponding to the theoretical figures for true Basic Lead Carbonate. That the crystal structure was similar to that of our Q. P. White Lead. A marked increase in Hiding Power and consistency values were observed.

Exposure Tests:

Comparative formulas of Sherwin-Williams' Q. P. (18 dry) and MacGregor Leads were ground and put on exposure as follows:

1. Soft Paste White Lead in Oil.
2. Martin-Senour Monarch Outside White
67% White Lead and 33% Zinc Oxide.
3. Sherwin-Williams Rex 496 Ivory
30% Basic Carbonate White Lead,
60% Lead Zinc, 10% Asbestine.

Exposures were applied three coats, vertical exposure on White Pine and Cedar.

Results to Date:

These exposures have been out approximately seven months or through an entire summer period, which is regarded as sufficient to give definite indication if severely abnormal failures were to occur.

Soft Paste Lead in Oil

Both paints show same degree of dirt collection and darkening, characteristic of a pure white lead paint.

Both are chalking mildly and equally, but the MacGregor film retains a slight degree of residual gloss compared with 18 dry. There are indications that the MacGregor Lead is beginning to enter the "clean up" or dirt shedding phase ahead of the 18 dry film.

No evidence of checking and both films closely alike.

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Martin-Senour Monarch Outside White

Only distinguishable difference between the two paints is a slight residual gloss with the MacGregor Lead, all other features being the same.

SWP Ivory

Same report as for the Monarch Outside White.

Discussion:

While it is too early to draw definite conclusions as to ultimate performance in paint formulations where the MacGregor Lead is the predominating constituent, the close similarity in behavior of the six films to date as to chalking tendencies indicates that when MacGregor Lead is used in moderate percentages in a mixed paint formulation, either a white or a tint, that the durability of that paint will not be appreciably impaired.

This conclusion is further supported by the similar crystal structure of the particles of the MacGregor Lead compared with 18 dry.

Cholley

CDH:AR
cc WSS HJH NEV EWF RHC