

#97 - SWP 471

Mr. E. W. Fasig and Mr. Van Loo inspected the panel and/or house tests of the National Lead Company (basic silicate white lead house paints only) and the Titanium Pigment Corporation at Sayville, N. Y. and of the du Pont Pigment Division at Wilmington, Delaware. A report was prepared and distributed.

Exposures 10518-59 CS, GN and F were examined after two years' exposure south and north vertical at Chicago and south vertical in Florida. The paints involve studies of basic silicate white lead (both National and Eagle-Picher) where basic silicate replaces (1) lead sulfate at equal volume, using XX 503 zinc oxide for 412 dry, (2) replacing basic carbonate white lead in a conventional 30% lead - 30% zinc oxide - 15% TiO_2 - 25% extender top coat pigmentation. Basic silicate was also substituted for equal volume of lead carbonate in Rex 450 and in MW-401 zincless primer.

The Chicago panels are difficult to evaluate because of the general cleanness even on the north. The principal failure is erosion. The SWP top coats made with basic sulfate white lead are the most pronounced in this respect. In general the MW 401 primer is inferior to Rex 450. National's 45-X basic silicate white lead gives poor results in MW 401. In the straight top coat comparisons, there is very little choice as to the special materials.

The Florida panels are much more varied in results and the major conclusions must be based on them; this applied to dirt as well as film integrity. Rex 471 with Rex 450 normally looks bad in this series because of a spotty surface flaking (poor clean-up). Eagle-Picher's material almost invariably cleans up without this prolonged spottiness, but while National's is just as clean in some cases, it is no better than the regular in other cases. Both show a "yellow" film, however, and are not satisfactorily white. The only cases of serious failure (more than a very slight microscopic cracking) are found on paints which contain Eagle-Picher and National basic silicate substituted for the basic sulfate content of the leaded zinc oxide normally contained.

Here again basic sulfate white lead shows up poorly when substituted for the BCWL normally contained. Paints in which the basic silicates have been used to replace the BCWL continue to perform equally well with the standard SWP. This difference in performance may possibly be ascribed to the use of a pure zinc (XX 503) in the first case and a co-fumed leaded zinc in the second.

In the Florida exposures MW 401 is only very slightly inferior to Rex 450 and the silicates in MW 401 are equivalent at this inspection to BCWL.