



M. VAN LOO
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2177 - Pigment Studies

Work is being resumed on the study of white pigment opacity factors. The general approach will follow the basic outline given in the Report of Investigations for February, 1944. Preliminary studies were reported in March and July, 1944. Since that time several minor changes have been made in the technique to be used.

In the calculation of contrast ratio as based on reflectance "over black" and "over white" it is deemed advisable to use the reflectance "over white" for the greatest film thickness as the "over white" factor in all determinations of contrast ratio. A second change will be made to report the opacity factors as sq.ft./lb. at contrast ratios of 91, 93, 95, 97 and 99%. After data has been collected for all of the pigments the selection will be made as to which CR group should be used as the opacity factors for this new index.

Chart follows.

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1977 - Cont.

Paint Type I - House Paint - Single pigments plus extender formulated to 18,000 Holley units. P.V.C. constant at 36% by addition of 20 F magnesium silicate. To date the following determinations have been made.

Dry No.		% Brightness	Opacity - Sq.Ft./Lb.				
			91% CR	93% CR	95% CR	97% CR	98% CR
** 9	Basic Sulfate White Lead	83.8	21.7	18.0	(16.2)	12.7	(10.0)
** 18	Basic Carbonate White Lead	86.9	27.9	23.8	19.7	14.7	(11.5)
** 412	35/65 Leaded Zinc	77.8	50.6	44.3	37.2	30.8	(26.2)
* 1271	Anatase Titanium Calcium	89.3	100	87.4	75.3	45.5	(33.6)
* 1403	Free Chalking Anatase TiO ₂	86.4	238	214	185	141	118
° 2030	Semi-nonchalking Anatase TiO ₂	86.2	244	217	190	155	135
° 2031	Non-chalking Rutile TiO ₂ "A-NC" or "O"	85.8	192	157	135	105	90

** Hiding values have been double checked.

* Hiding values have been checked once.

° No check tests have been made.

(.) These values are determined by extrapolation.

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