

	Chicago	Auxiliaries Research
	PCandC	
Houston	Sales	November 5, 1951
O. H. Clark, Jr.		Marine Paint and Varnish Co.
Oct. 15th		

I gave you the information that was available on the comparison of Sunolith High Opacity Lithopone and Permolith 20L and Permolith 40L in my letter of October 15th, which crossed in the mail with your letter of the same date.

Based on the oil absorption, it appears that Permolith 40L would be closer in body to Sunolith High Opacity. We have now made paints comparing the properties of Sunolith High Opacity and Permolith 20L, 40L and W-320 in a flat wall paint formula containing 750# of lithopone per 100 gallons. This is a substantial quantity of lithopone and certainly should bring out differences in properties.

The results very definitely indicate that from a standpoint of color in paint and hiding power, both 20L and 40L are equal, if not slightly superior to Sunolith High Opacity. Sunolith High Opacity shows higher low-angular sheen than either the 20L or 40L, and definitely higher than W-320. Likewise, both the 20L and 40L, as well as W-320 show equal or higher brightness than Sunolith High Opacity, as determined by the Reflectometer. There appears to be no appreciable difference in the visual gloss at high angle of incident. Results are tabulated below in the flat wall paint formula containing 750# of lithopone per 100 gallons:

Paint No.	AJRL #	Wt./Gal.	Grind	Cons. SW Cup #3	Stormer K.V.	
				One Day	1 D.	3 D.
143 - W-320	1112	13.77	1-3/4 H	Too Thick	96	99
144 - 40L	1635	13.84	1	34.6	84	88
145 - 20L	1636	13.86	1-1/4	19.0	74	79
146 - Sunolith	1975	13.83	1-3/4	19.6	77	79

Drawdowns were made on black and white hiding power sheets and also on grey and white striped sheets. Reflectance values were run on the Hunter Reflectometer, and visual observations were made on the grey and white drawdowns. All drawdowns were at .005" film thickness. Results were as follows:

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N23282

Mr. O. H. Clark, Jr.

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Paint No.	Reflectance Values		Visual Observation		
	Contrast Ratio	Brightness	White- ness	Low Ang. Sheen	Hiding power
143 - 320	87.35	89.05	2nd	4th	2nd
144 - 40L	88.30	88.75	1st	3rd close.	1st
145 - 20L	88.55	88.55	1st close.	2nd close.	1st
146 - Permolith	87.8	88.0	3rd poorest.	1st Distinctly	3rd

It appears from our test in this formula that either Permolith 20L or 40L should be satisfactory for a match for Sunolith High Opacity Lithopone. I would recommend that you stick with the Permolith 40L since this is the one that we originally recommended and should give you, normally, slightly better sheen, equal hiding power and color. However, if they find that the consistency runs slightly too high for them, then I would recommend the Permolith 20L. 20L in the flat paint we tested in does show closer consistency to Sunolith High Opacity.



J. E. Adams
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CH:mf

cc: J.E.
J33
JVR

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