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Philadelphia Laboratory
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MEMORANDUM REPORT #M-266:

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ACTIV-8 TO IMPROVE DRYING OF HOUSE
PAINT

Activ-8 is an experimental drying aid promoted by the R. T. Vanderbilt Company. It has been tested in the composition of 301-875 #40 Outside White according to recommendations of the supplier.

The active material is an organic compound not disclosed by the supplier. It is claimed to improve the drying of paint in combination with cobalt or manganese drier. For house paint, the supplier recommends that lead drier be omitted and that Activ-8 solution be used with manganese drier in the ratio of 6.5/1 to 13/1 of Activ-8 solution to manganese metal. The drying tests have been carried out according to these recommendations. Results are detailed in the attached table.

Conclusions:

We do not confirm the claim that Activ-8 improves the drying of house paint. At low temperature, the drier combinations with Activ-8 are slightly slower in touch drying and hardening than the regular drier combination with lead naphthenate. Since Active-8 is an expensive material that would raise the cost of the paint considerably, it does not appear to be of further interest.

The color of the paint is considerably improved with Activ-8. The improvement in color probably comes from the elimination of lead drier, since some improvement is also obtained from the lead-free drier combination with manganese, lead and calcium used in 303-768 Fume Resistant White. Since an improvement in color is in prospect through the use of soya PE oil, together with an improvement with drying and a cost saving, the use of Activ-8 to improve the color would not be economical.

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Activ-8 has no effect on the gloss or solids content of the paint.

Details:

Drying tests were carried out in the constant temperature room at 77°F. and 65% relative humidity and in a cooler at approximately 38°F. and high humidity. Paints were applied on glass with Byrd applicators having 5.6 mils and 7.0 mils clearance. These give dry films, respectively, of normal and slightly heavy film thickness.

The paints were considered dry to touch when they were rated as having very slight tack. The films were also tested by thumb pressure; they were considered to be firm when the ball of the thumb, pressed with full strength against the paint film, did not break the surface.

For complete information, some of the paints will be exposed in Series 10860 to determine if Activ-8 has any effect on durability. No further work is planned with this product in House Paint.

PHILADELPHIA LABORATORY

W. F. Singleton
W. F. SINGLETON

WFS:mjb

Att.

DRYING OF 301-875 #40 OUTSIDE WHITE WITH ACTIV-8

Code	Drier on Oil %	Activ-8 Sol. to Mn Metal	Days to Touch Dry Stage			Days to Thumb Firmness				
			Chr-77°F. Nor.	Thick Nor.	Thick	Chr-77°F. Nor.	Thick Nor.	Cooler 40°F. Nor.		
301-875-P-875566	.03 Mn, 1.0 Pb	--	2	2	3-1/2	3-1/2	3	3	4	5
P-301-R-51033	" " "	--	2-1/2	3	2-1/2	2-1/2	3	3	4	4
P-301-R-51034 (303-768)	.03 Mn, 0.1 Zn, 0.3 Ca	--	2-1/2	2-1/2	3-1/2	3-1/2	3	3	4	5
P-301-R-51035	.03 Mn, 0.2 DS-20163*	6.5/1	2-1/2	2-1/2	3	3	3	3	4	4
P-301-R-51037	" " 0.3 DS-20163*	10/1	2-1/2	2	3-1/2	3-1/2	3	3	4	5
P-301-R-51036	" " 0.4 DS-20163*	13/1	2-1/2	2-1/2	3-1/2	3-1/2	2	3	4	5

* DS-20163 is Activ-8 Solution: 38% organic agent in ethyl-hexoic acid.