

TRADE SALES PRODUCTS

OIL PAINT - TRADE

January 1964

Subject: Japalac (Y-1217-exp. CL3M P-1541) Tall Oil Examination
(ST4313G2)

Contributors: Bednarik, Southwick

Summary: Our examination of the Cleveland Plant's batch of Japalac Y-1217 (CL3M p-1541) made with RCR-6223 p-120 (Sylfat 496 version of V-869) versus four standard Cleveland batches (p-2077, p-6263, p-7162, p-786) of Y-1217 made with Soya V-869 has shown:

1. The tall oil batch to be equal and acceptable for viscosity, application, flow, and gloss.
2. The tall oil batch to be slower in tack-free dry (6-7 hours versus 5-6 hours) but equal to superior for overnight dry.
3. The tall oil batch to be noticeably superior for non-yellowing at one month.
4. The tall oil batch to be slightly superior for gloss retention and haze resistance.
5. The tall oil batch to be very superior for gloss, gloss retention, sharpness of appearance, and haze resistance when dried and cured for 1-2 weeks in high humidity conditions.

We have just begun our examination of RCR-6223 p-995 (Sylfat 96 version of V-869) in laboratory batches of Y-1217 Japalac. We are awaiting Cleveland Plant batches of Japalac Y-1217 using this vehicle.

Subject: Gloss Retention Under High Humidity Conditions

In order to examine the gloss retention characteristics of gloss enamels that are dried under conditions of normal temperatures and very high humidity we have been involved in an extensive examination. We are using a wooden box, 26" x 26" x 26", which is well sealed and has a small electric fan in it to insure good circulation. The temperature is constant at 78-80°F. The inclusion of two pans of a super-saturated "solution" of table salt (NaCl) in water (approximately one quart of water with one gallon of salt) has established a constant relative humidity of 79-80%.

Draw-downs of 3 mil wet films on Morest charts are prepared and immediately put into the box. A visual examination is then made on this panel and a duplicate panel dried under more normal conditions (73-77°F and 35-40% R.H.) each day for one to two weeks.

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Partial results are now available on some gloss enamels, with far more work on gloss and semi-gloss enamels now in process or planned. Results thus far available are:

1. A batch of Y-1217 (CL3M p-1541) made at Cleveland with RCR-6223 p-120 (Sylfat 496 version of V-869) was far superior to four Cleveland batches of Y-1217 made with standard Soya V-869.
2. An examination of several national brand gloss enamels showed:
 - Poor - Std. soya Japalac & Pittsburgh's Waterspar.
 - Fair - DuPont's Dulux & S.W.'s Enameloid.
 - OK - Tall oil Japalac & Dutch Boy's Diamond & Sears' Snowwhite, & Benny Moore's Impervo
 - OK+ - Pratt-Lambert's Vitralite.
3. A series of various additives in std. soya Japalac which includes:
 - Std. CH-175 (soya Lecithin), no CH-185, replacement of CH-175 with CH-343 (Nuosperse 657) as a wetting agent, replacement of CH-185 with VM-523 Calcium Naphthenate) as a wetting agent, use of VM-731 (DC200 Silicone Oil), and the use of M-409 (Aerosol OT).

Of these all were fair except for the M-409 which was far superior. More work is planned to further evaluate the possible use of M-409 in our gloss & semi-gloss enamels.

Subject: Periodic Examination of Exterior Exposures

Contributors: Bednarik, Southwick

Summary: Series N-3-32 - 2 Panels - 5 Months - Retired
Tris Amino V-869 type alkyd complete checking with no mildew inhibition in Japalac Y-1217.

Series N-2-51 - 8 Panels - 11 Months - Continuing
Polyurethane - Alkyd (V-891) Florenamels at ratio of 75:25 equal to Speedenamel. 50:50 ratio acceptable and far superior to std. Florenamel which is checking.

Series N-2-83 - 12 Panels - 11 Months - Retired
Various drier systems in V-869 and V-891 enamels with no distinct differences.

Series N-2-68 - 7 Panels - 12 Months - Continuing
Polyurethane - Alkyd (V-869) Florenamels at ratios of 25:75 & 50:50 for better than std. Florenamel but not quite equal to Speedenamel or 100% V-869 Enamel.

Series N-2-65 - 8 Panels - 12 Months - Retired
Y-4575 with exp. Ruby Red Dramatones. Three exp. bases tested are far superior to std. but work discontinued due to decision to use Color Trend Fast Red Base.

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Subject: Use of pure TiO₂ to replace Tical pigmentation in 1W125, Endurance House Paint Tint Base
(ST4310E2)

Contributors: Davis, Southwick

Summary: A formula has been written for cost using W208, Pure TiO₂, and a combination of magnesium silicate and calcium carbonate, and W35, 10% leaded zinc, with the same type vehicle as the 1W125 standard (0286,0-1)

Large area brushouts of this material vs the standard have been made with the results equal in brushing, flow, gloss and gloss uniformity. Raw material cost of this Experimental 1W125 is \$1.44 per gallon as compared to \$1.50 for the standard 1W125.

Other work is being done along this line on a pigmentation similar to the Experimental 1W125 mentioned above, but with the EGL64303 Soyagel, 0-314, type vehicle. This formulation gives much improved brushing and possible lower cost. Work will continue to obtain a fuller, higher gloss. Exposures on these formulas are being made at Cleveland and New Orleans.

Subject: New Study of Mildewcides in Exterior House Paint Systems
(ST-4310E2)

Contributor: Paul Hawkins

Summary: Since the last mildewcide study, two years ago, a number of additional mildewcides considered to be of some merit, have appeared on the market. A series of these incorporated into two of our house paints, primer and topcoat, will be exposed on the exterior fences, Cleveland and New Orleans.

Discussion: The mildewcides are being incorporated into:

1. Y-1800C Endurance - Mildew & Fune Resistant House Paint White.
2. Y-3651-A Lead Free Oil Paint - House Paint Primer.

The following schedule was used:

A. Y-1800

1. Replace VM-659 with Metasol 57 at equal mercury.
2. Replace VM-659 with Metasol 57 at equal cost.
3. Replace VM-659 with Ottasept at cost of 1.
4. Replace VM-659 with VM-659 - Fungitrol 11 blend 1 to 1 by % at cost of 1.
5. Replace VM-659 with Nuodex Fungicide No. 10 (formerly 1113-158) at cost of 1.
6. Replace VM-659 with Vancide PA at cost of 1.

Expose at Cleveland and New Orleans over Y-3651A and

Y-1851. Expose Y-1800C as standard over Standard Y-3651A and Standard Y-1851.

B. In Y-3651-A

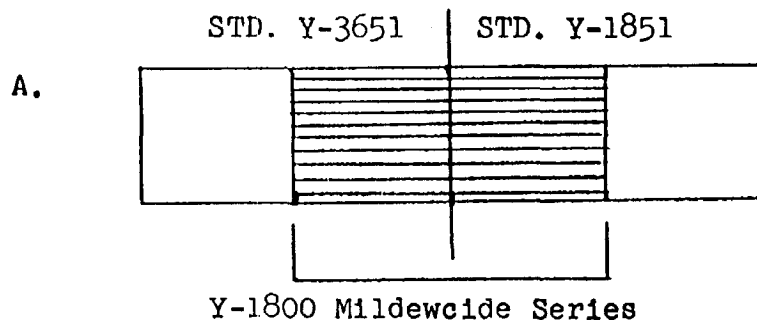
- | | |
|---------------|---------------|
| 1. Same as A1 | 5. Same as A5 |
| 2. Same as A2 | 6. Same as A6 |
| 3. Same as A3 | 7. Same as A7 |
| 4. Same as A4 | |

Expose the Y-3651-A Mildewcide series under the Y-1800 Mildewcide series and Standard Y-3600.

Expose B1 under A1 and Y-3600 EK
 Expose B2 under A2 and Y-3600 EK
 Expose B3 under A3 and Y-3600 EK
 Expose B4 under A4 and Y-3600 EK
 Expose B5 under A5 and Y-3600 EK
 Expose B6 under A6 and Y-3600 EK
 Expose B7 under A7 and Y-3600 EK

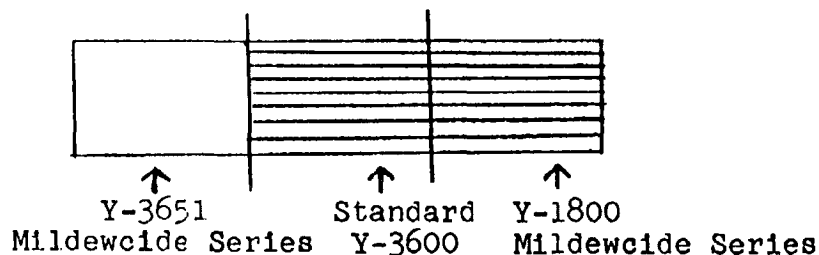
Individual grinds were made with each mildewcide. It was noted that there are some viscosity differences between the paints using the various mildewcides. Package stability will be followed closely as well as mildew resistance.

The paint exposures will be made on Cedar Siding.



The Y-1800 Mildewcide Series will be over Standard Y-3651A and Standard Y-1851 leaving one half of each primer not topcoated.

B.



The Y-3651 Mildewcide Series will be topcoated with:

ADM - AROLIN 1652

TABLE I (SHP March 1964)

		<u>ME4-62-1</u>	<u>ME4-63-1</u>	<u>ME4-63-2</u>	<u>ME4-71-1</u>	<u>ME4-72-1</u>
S-14	Water	335.0	315.0	321.0	381.0	368.6
CH-473	TKPP	3.0	3.0	3.0	4.0	4.0
	Tergitol NPX	10.0	10.0	10.0	--	--
CH-181	Ethylene Glycol	18.6	18.6	18.6	18.6	18.6
	Colloid 581-B	2.0	2.0	2.0	2.0	4.0
CH-450	Daxad 30	--	--	--	7.0	7.0
CH-474	Igepal CTA-639	--	--	--	8.0	8.0
	W-208 Zopaque					
	R88	102.0	13.0	250.0	--	--
W-121	Snowflake	143.0	150.0	85.0	45.4	45.4
W-188	Nytal 300	144.0	155.0	92.0	145.0	145.0
G-73	Chrome oxide	--	--	--	--	--
		25.0	--	--	--	--
YW-89	Yellow oxide	--	55.0	6.5	59.4	59.4
W-33	Zinc oxide	--	--	75.0	30.0	30.0
B-131	Witco Black F-1	--	--	--	4.2	4.2
R-269	Red oxide Mapico #344	--	--	--	24.3	24.3
W-158	Mineralite 3X	--	--	--	21.0	21.0
M-239	Celite 281	--	--	--	37.0	37.0
CH-380	Phenyl Mercuric					
	Borate	1.5	1.5	1.5	--	--
VM-659	Super Ad It	--	--	--	6.0	6.0
195T-27	Cellosize QP-4400					
	(3% soln.)	33.0	50.0	68.3	50.0	62.5
	Acrysol G-110	10.0	10.0	10.0	15.0	15.0
	Arolin 1652	275.0	250.0	250.0	215.0	215.0
	24% Lead Drier					
	"Witco"	6.0	5.0	5.0	5.0	5.0
	6% Cobalt Drier					
	"Witco"	2.5	2.0	2.0	2.0	2.0
	6% Manganese Drier					
	"Witco"	2.5	2.0	2.0	2.0	2.0
305A-90	Thalo Blue	--	15.9	--	--	--
305G-78	Thalo Green	--	24.7	--	--	--
Solids Volume		50%	47.5%	47.7%	41.4%	41.4%
PVC		32.0%	34.7%	35.0%	35.7%	35.7%
Yield in Gals.		100.0gal.	100.0gal.	100.0gal.	100.0gal.	100.2gal.

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TABLE II (SHP March 1964)

	ME4-64-1	ME4-64-2	ME4-65-3	ME4-66-1	ME4-69-1	ME4-70-1	ME4-73-1	
S-14	Water Balabo 748 Zinosperse A Nattrosol 250 HR (2.5% soln.) Leaded Zinc Oxide 10-12% Tamol 850 KTFF	211.0 2.0 14.0	218.3 2.0 14.0	218.3 2.0 14.0	218.3 2.0 14.0	232.5 2.0 14.0	228.3 2.0 14.0	235.0 2.0 14.0
W-35		75.0 75.0 7.0 2.0	90.0 75.0 7.0 2.0	90.0 75.0 7.0 2.0	90.0 75.0 7.0 2.0	75.0 30.0 7.0 4.0	75.0 140.0 7.0 2.0	60.0 75.0 7.0 4.0
CH-4-13		10.0 112.0 115.0 47.0	53.0 117.0 119.0	-- 115.1 120.0 7.3	250.0 58.5 51.0 5.7	-- 45.4 145.0 59.4	190.0	-- 81.3 81.3 63.3
W-208	Zopaque #68	--	--	--	--	--	--	--
W-121	Snowflake	--	--	--	--	--	--	--
W-188	Nytal 300	--	--	--	--	--	--	--
W-189	Yellow Oxide	--	--	--	--	--	--	--
G-73	Chrome Oxide X-1134	--	22.3	--	--	--	--	--
BN-55	732 Brown	--	--	24.1	--	24.3	--	--
R-259	Red Oxide Mapico #344	--	--	59.0	--	4.2	--	21.4
B-131	Witco Black F-1	--	--	--	--	21.0	--	--
W-153	Mineralite 3X	--	--	--	--	37.0	50.0	--
M-233	Cellite 231	--	--	--	--	--	90.0	--
W-189	Asbestine 3X	--	--	--	--	--	--	--
W-10	Barytes	--	--	--	--	--	--	50.0
BN-12	Brown Oxide #575	--	--	--	--	--	--	47.6
WM-559	Linorol	350.0	350.0	350.0	350.0	350.0	350.0	360.0
	Acrysol G-110	5.0	5.0	5.0	5.0	5.0	5.0	15.0
	Super Ad It	1.0	1.0	1.0	1.0	2.0	1.0	2.0
	Aquadis 24% Lead Drier	8.6	8.6	8.6	8.6	8.6	8.6	8.6
	Aquadis 5% Cobalt Drier	4.3	4.3	4.3	4.3	4.3	4.3	4.3
305-A-90	Thalo Blue	13.4	--	--	--	--	--	--
305-G-73	Thalo Green	21.3	--	--	--	--	--	--
305-B-130	Black Dispersion	--	--	--	--	--	41.2	5.5
	Solids Volume	40.6	40.7	40.6	40.6	40.7	35.9	40.6
	TVG	35	35	35	35	35	35	35

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