

TRADE SALES PROGRESS REPORT
OCTOBER 1952

House Paints - House Paint Primers

In June when the Endurance Tint Base, Y-1804, was changed from the Leaded Zinc/Lithopone/Inert formula to the new Y-1804-S Leaded Zinc/Titanium Oxide, Inert, we made up a series of tinted house paints and exposed on the roof at 45° South. These tints were made up to match the colors shown on the Endurance Pastel House Paint card. Examination has been made after three months of summer sun. The lighter shades show greater differences between the two tint bases. The Leaded Zinc/Lithopone/Inert formulations show a definite darkening and more apparent dirt collection. The Leaded Zinc/Titanium/Inert formulations show no change on the lighter shades and only a trace fading on the deeper tints. These paints look cleaner and much more desirable than those made with the older base.

Safflower Seed Oil

Our work with this oil has been mentioned before. Our exposure panels have had 36 months at 45° South, and panels have been removed from the racks. Test paints were made over the Endurance Y-1800-X formula.

1. Regular Y-1800-X containing 0-1 and 0-5 was used as a control.
2. Same except crude Safflower Oil replaced the 0-5.
3. Same as #1 except crude Safflower Oil replaced both 0-1 and 0-5.

At end of three years all of the paints look approximately the same. Only film failure is the expected normal amount of chalking. We see no reason why Safflower Oil can't be used as a house paint oil in conjunction with linseed whenever a price advantage might exist.

Gray Paints

Some comments have been received from the Dallas area regarding Endurance Grays showing some streaking on aging. Samples of DuPont, S-4 and Pittsburgh were received from New Orleans, also some of their productions of Y-1859 and Y-1860. These were brushed out in duplicate and exposures made both North and South, vertical. At the end of nine months the South panels show a uniformly slightly dulled appearance. The North panels all show streaking where water has run down from the racks. These streaks also show lower sheen, which also adds to a mottled appearance of color. We would say that an abnormal rainy season would cause much more of a mottled effect on a gray house than a dry season.

About the same time we received two other competitive gray paints from Dallas which we found contained some alkyd. These were exposed about the same time along with a Y-1859 of New-Orleans production. After 9 months the Y-1859 shows the greatest amount of chalking and loss of gloss.

It is apparent that paints containing some alkyd give more gloss, gloss retention and better color retention are required to meet competition in this area. This is the same experience we had with the Williamsburg Greens which were made up for Dallas.

Leaded Zinc in House Paint

Comparisons were made using Y-1800-X Endurance White. The only variable was the method of introducing the lead and zinc portion of the pigment.

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- (a) W-6 - 35% Leaded Zinc - Control.
- (b) W-35 - 10% Leaded Zinc and W-1 (Basic Sulphate White Lead).
- (c) Ozark 12% Leaded Zinc and W-1.

Panels were exposed 45° South. After 26 months very little difference is shown except the "C" paint containing the Ozark 12% Leaded Zinc appears to be chalking faster.

Chalking of House Paints

A series of White House Paint Tests in which we made comparisons of different grades of anatase titanium oxide have had 24 months exposure. These tests show no appreciable difference between W-91, W-133 and W-177 as to the amount of chalk accumulation. Several special samples of TiO₂ which showed a slower tendency to chalk earlier, now show more accumulation at this time. Since these tests comparing W-91, W-133 and W-177 were made with actual plant productions of Endurance White, we feel that occasional complaints on too much chalking are more likely to be due to other factors such as improper preparation of surface. We always note that exceptionally dry seasons cause greater accumulation and then with the first few rains an exceptional amount washes down. This is always more noticeable to the home owner than if the washing off is more gradual.

House Paint Primers

Exposure tests were put out in March, 1950, on Y-1851 formulations with W-91 and W-163 comparisons for the titanium oxide portion of the primer. Both North and South exposures were made of each formulation. Two coats of Endurance White were put over each panel. Coats were lapped so that a portion of primer only was exposed, another portion with primer and one coat of house paint over the primer, and the remainder of each panel shows the three-coat system.

At the end of 18 months the South panel of the W-91 formulation showed bad chalking of the primer. The North panel did not show any chalking of the primer. In fact, dirt collection was shown. At the end of 29 months the primer containing W-91 has chalked down to bare wood on the South. The same primer on the North panel is just starting to chalk and is still dirty due to high lead content.

At the end of 18 months the W-163 primers show no chalking on the North exposure and only starting on the South. At the end of 29 months, the W-163 primers still show no chalking on the North exposures and show only moderate chalking in the South exposures.

The finish coats of Y-1800-X, of course, show nothing unusual as yet but continued exposure will undoubtedly show the value of rutile titanium oxide in the primer from an over-all standpoint.

We have other tests running which are variations of the non-chalking titanium type but with also variations in vehicle composition. The tests have not progressed far enough to draw conclusions. However, the value of non-chalking titanium is indicated.

Flat Wall Paint

Study of new type alkyd flats has continued with the examination of various purchased alkyds. We have formulated GL-62153 with an alkyd purchased from Washburn Company. We have sent this flat to a number of our divisions and to local

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customers for test. This alkyd has given the best results of those examined to date. The outstanding properties are ease of brushing, good holdout or self-sealing properties, freedom from flashing and excellent washability. Other interesting features are non-settling and non-skinning properties.

-Factory Letters-

Westinghouse Electric Co.

Two machinery enamels were made to their standard specifications.

#5611 Machinery Gray

GL-62408

#9252-2 Machinery Medium Gray

GL-62409

Materials dry 3-4 hours with full gloss. Brush full body or may be reduced 8:1 with S-42 for spray.

Lusterless O. D. Paint, GL-62479, was formulated for spraying crates and shipping containers. Reduces 2:1 with mineral spirits or V.M. & P. Naphtha for spray. Price is low.

Graphic Arts

Cap and Pennant Colors: The following line has been formulated for silk screening on felt, burlap and cloth. They set up in 3 to 4 hours well and hard overnight. They dry to a semi-gloss to flat sheen, depending on texture of the textile. Normally screened full body.

White	GL-62433
Red	GL-62434
Blue	GL-62435
Green	GL-62436
Yellow	GL-62437

This line will not be stocked regularly but is shown on the Graphic Arts Price List.

H. Forsberg Co. Two gloss silk screen pastes were made up in standard for Esso Oil Co. sign work in the regular quality.

Esso Blue	GL-62416
Esso Red	GL-62417

Colors air dry overnight or may be force dried 15 minutes at 225°F.

Raw Materials Tested

Sample of E.P. #350 - 35% Leaded Zinc from Eagle Picher Co. - was compared with regular W-6 using Endurance White formula. E.P. #350 showed easier grinding, trace more body, lower gloss and less hiding. Weatherometer tests showed satisfactory durability. Exterior exposure panels have been put out.

MSK-1 and MSK-2 Talk from Loomis Talc Co. have been compared with W-11 (Asbestine) and W-188 (Nytal 300) - Chem. Lab Report:

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	<u>MSK-1</u>	<u>MSK-2</u>
Color:	Trace whiter than W-11 and W-188.	Trace cleaner than W-11. Trace dirtier than W-188.
Transparency:	Slightly more opaque than W-11. Similar to W-188.	Similar to W-11. Slightly more opaque than W-188.
Oil Absorption:	10% less than W-11 and W-188.	23% more than W-11 and W-188.
Fineness:	Slightly finer than W-11, coarser than W-188.	Same as W-188.

When ground in Y-1800, House Paint formula:

	<u>W-11</u>	<u>W-188</u>	<u>MSK-1</u>	<u>MSK-2</u>
Grind:	4	4	5	4
Wt/gal.:	15.0	15.0	14.7	14.7
Body:	88 K.U.	93 K.U.	86 K.U.	90 K.U.
Gloss:	61	60	68	62
Color:	Trace yellowish	Same	Trace whiter	Trace Whiter

Microscopic examination showed W-11, MSK-1 and MSK-2 to look similar. W-188 appeared to show a greater quantity of acicular particles. Exterior panels have been put on exposure.

Medium Chrome Yellow, YW-2: Our present standard for YW-2 is Y-469-D, Lot 658, from DuPont. The following samples were submitted by other vendors.

Reichhold Chemical	#0-1585
" "	#1079
Kentucky Color	999-J

These were ground out in V-872 and compared with the standard for all properties including tints. None of these were as good for mass tone and tint as the standard Y-469-D from DuPont nor did they hold their color as well on the weatherometer tests. It was recommended that they should not be approved as sources for YW-2.

Sample of S-W Light Orange #12311 (Sample CC-436) was compared with standard YW-22 in a similar manner and approved as a secondary source of supply.

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