

# LEAD

## PRIME COATS

### improve paint systems

The test panels show how, after one year's exposure to Long Island's erratic weather conditions, the system with the white-lead-base primer has maintained its film integrity and adhesion and that the finish coat formulation is not as suitable as a primer.

No stronger or more convincing argument can be given for using white lead pigment in your primer formulations; and certainly, no customer could ask for better proof of the protection of white lead primers in his house paint systems. For information on the most effective use of "lead" in your paints, write for "White Lead in Mixed Pigment House Paints," and "White Lead Technical Bulletin #1." *Lead Industries Association, 420 Lexington Avenue, New York 17, New York.*

In this comparative weathering test, a commercial, lead-base, finish paint, was applied, self-primed, to a cedar panel (right). The panel on the left has a topcoat of the same finish paint but it has been applied over a typical, white lead-base, multiple pigment primer. On both panels the edges were thoroughly sealed with two coats of L.I.A. primer P-4. Cross grain saw cuts were subsequently made two inches into the panels from one edge. The panels were then exposed 45 deg. south vertical at Sayville, Long Island, New York.



Finish Paint on Primer Base



Self Primed Finish Paint

(MAGNIFICATION 4X)

*The photographs show the film cracking effect moisture has on the self primed house paint system as compared to the protection given by white lead base paint, formulated as a primer.*

### "LEAD" LENGTHENS THE LIFE OF PAINT BECAUSE:

**It Stabilizes . . .** neutralizes acidic compounds resulting from decomposition of the vehicle - prevents the film from becoming soft or liquefying.

**It Plasticizes . . .** forms lead soaps which increase film flexibility.

**It Strengthens . . .** mechanically reinforces the film, increasing its elastic strength with flexible, spiny lead-soap particles.

**It Resists Water . . .** reduces water sorption to a small fraction of that of lead-free paints.

**It Limits Oil Penetration . . .** holds more of the vehicle in the film where it is needed; less in the substrate.

**It Prevents Chalking and Inhibits Mildew . . .** makes paint look better, longer.

#### L.I.A. PRIMER P-4\*

| Pigmentation (64.1%)                 | Per Cent | Lb./100 gal. |
|--------------------------------------|----------|--------------|
| White Lead                           | 48.5     | 473          |
| Rutile Non-Chalking Titanium Dioxide | 15.1     | 148          |
| Magnesium Silicate                   | 35.4     | 345          |
| Litharge                             | 1.0      | 10           |
| Total                                | 100.0    |              |
| Vehicle (35.9%)                      | Per Cent |              |
| Raw Linseed Oil                      | 34.0     | 187          |
| VM1767**                             | 21.0     | 113          |
| VM1693***                            | 10.5     | 58           |
| Blown Linseed Oil (Z-2)              | 5.0      | 27           |
| Driers                               | 0.5      | 3            |
| Mineral Spirits                      | 29.0     | 150          |
| Total                                | 100.0    | 1524         |

PVC=39.4%

#### FINISH PAINT

| Pigmentation (63.1%)     | Per Cent | Lb./100 gal. |
|--------------------------|----------|--------------|
| White Lead               | 35.0     | 336          |
| Zinc Oxide               | 30.0     | 290          |
| Anatase Titanium Dioxide | 15.0     | 145          |
| Magnesium Silicate       | 20.0     | 191          |
| Total                    | 100.0    |              |
| Vehicle (36.9%)          | Per Cent |              |
| Refined Linseed Oil      | 60.0     | 336          |
| Bodied Linseed Oil (Z-2) | 15.0     | 84           |
| Mineral Spirits          | 22.0     | 124          |
| Driers                   | 3.0      | 16           |
| Total                    | 100.0    | 1522         |

PVC=33%

\* formula from "White Lead Technical Bulletin #1."

\*\* 60 parts linseed oil; 40 parts dehydrated castor oil, bodied to obtain a viscosity of V. Gardner 70% solids in mineral spirits.

\*\*\* 5 gal. length, low acid number ester gum varnish cooked with dehydrated castor oil. Viscosity is B-C Gardner at 59% solids.

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