

LEAD INDUSTRIES ASSOCIATION

888 MADISON AVENUE

NEW YORK 17, N.Y.

December 27, 1961

SUBJECT: PROPOSED COPY FOR
LEAD PIGMENTS REPORTS
NOs. 1 and 2" Ads

To Members of the Lead Pigments Technical Committee:

Messrs: R. P. Bates

CC: Mr. E.K. Zimmermann

E. H. Butsow

M. E. Kinsore

R. H. Quenell

Paul Whitford

Dr. L. L. Carrick, Chairman

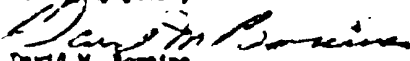
I am attaching, in duplicate, proposed copy for ads Nos. 1 and 2 to be run in the paint magazines in 1962.

The mast head for each of the ads to be run in this series, seven in all, will be the same and will read: "Lead Pigments Report No. ____."

I would appreciate your reviewing the copy in each of the ads, making whatever technical corrections or changes you deem necessary on one of the two copies enclosed, and returning it to me by January 10, 1962.

If I do not hear from you by that time, I will assume that the copy for both ads meets with your approval.

Sincerely yours,



David M. Borcina

Secretary, Lead Pigments Technical Committee

DB:ED

SUGGESTED COPY FOR LEAD PIGMENTS REPORT NO. 1

This is the first in a series designed to help keep you posted on research and new developments in lead pigmented paints for a wide range of exposures. This first report discusses red lead based primers for seawater immersion and for galvanized surfaces. Others to follow will discuss: The use of lead pigments for latex house paint primers; new anticorrosive pigments for the painting of structural steel; lead pigments in highway guard rail formulations, and in traffic marking paints.

Primer for Seawater Immersion

One promising recent formulation is an anticorrosive primer developed after a thorough screening by the Lead Pigments Technical Committee and subjected to full-scale "service tests" by the U.S. Navy on the hulls of three destroyers.

The test results indicate that this red lead-coumarone primer (L.I.A.No.900) offers comparable protection at lower cost than ϕ 14W (MIL-P-19453), which is the Navy standard for shipbottom service for antifouling systems other than vinyl.

On two of the three test hulls, protection afforded by the newer primer was judged equal to or slightly better than that provided by ϕ 14W. In the third case, L.I.A.900 proved slightly inferior (average merit score 98.3 vs. 99.5), although this might be outweighed in similar applications by the cost advantage displayed by L.I.A.900 in all three instances.

Formula L.I.A. 900

(Composition to be included in the ad)

see

Primer for Rusted, Weathered
or New Galvanized Steel

A long-standing need has been filled with the development of a single primer that will effectively protect galvanized surfaces against further deterioration regardless of their condition when the primer is applied.

Six years of extensive field tests, on rusted, weathered, and new surfaces, have established that Formula L.I.A. 900 surpasses in performance the lead-free primers generally recommended for use on galvanized steel. It is effective as a

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Pigments Report No. 1

primer in one or more coats either exposed to the weather or covered with a suitable finish coat.

Formula L.I.A. 304

(Composition to be included in the ad)

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Other Formulations, Paint Systems
in New L.I.A. Technical Letter

Just off the press and available on request to paint chemists and others interested is a new authoritative source of information on red lead-based paint systems.

Lead Pigments Technical Letter No. 15 discusses the general properties and suggested uses of paints recommended by the L.I.A. Lead Pigments Technical Committee.

Surface preparation and painting systems are detailed for: highway structural steel, railroad structures and rolling stock, hydraulic structures, industrial and marine environments, and rusted, weathered or new galvanized steel.

Two dozen paint formulations are presented, and a chart shows the correlation between the old paint numbering system and the new system being adopted by L.I.A. with the issuance of this LETTER.

Address requests for Lead Pigments Technical Letter No. 15 to: Lead Pigments Technical Committee, Lead Industries Association, Inc., 292 Madison Avenue, New York 17, N.Y.

SUBMITTED COPY FOR LEAD PIGMENTS REPORT NO. 2

The acceptance of latex type exterior house paint systems is being retarded by the tendency of such paints to exhibit disagreeable and unsightly staining soon after application. It is generally agreed that such staining is caused by water soluble dyes or tannins contained in much of the woods used in construction.

The staining appears as a uniform darkening over the entire paint film or of varying intensity depending upon the concentration of the dyes throughout the surface of the wood. Unfortunately, this staining is carried through from one coat of paint to the next.

The lead pigments industry therefore has concentrated with some success on the development of lead compounds that would neutralize or fix this staining in the priming coat.

Their findings indicate that a few of the lead pigments are showing considerable promise as additives to latex emulsion type house paint primers by rendering insoluble the water soluble materials in wood. Early indications are that the basic carbonate white lead is effective for this purpose and showing perhaps greater promise are the white lead silicates.

The water soluble materials are acidic in nature and combine with insoluble basic lead compounds, such as basic lead pigments in suspension, to form an insoluble lead organic salt complex. This complex permanently fixes the stain in the initial paint film and prevents it from migrating to the succeeding paint films on multiple coat applications. Tests conducted have indicated that, weight for weight, the more basic the lead pigment, the more effective it will be.

LEAD-PIGMENTED WATER EMULSION PAINTS

Acrylic latex house paint primers with one quart per gallon of basic silicate white lead containing additive, applied to red cedar, has under accelerated and short term weather exposure tests shown exceptional stain control and marked reduction of nailhead staining. Also, the lead-containing additive does not excessively retard drying and the modified paint is easy to apply.

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Pigments Report No. 2

The experimental formulation for the latex additive containing basic silicate white lead which has undergone extensive short-time testing is as follows, and the wide range in weight of lead silicate is dependent on the type of lead silicate used:

EXPERIMENTAL LATEX ADDITIVE
(Use One Quart Per Gallon of Water Emulsion Paint)

<u>Pigment</u>	<u>Pounds Per 100 Gallons</u>
Basic Silicate White Lead	465 to 750
Magnesium Silicate	200
Bentonite 34	5
<u>Vehicle</u>	
Alkyd Resin, TT-A-266, Type I, Class A	242
Refined Linseed Oil	350
24 Per Cent Lead Naphthenate	6.9
6 Per Cent Cobalt Naphthenate	2.8
Anti-Skinning Agent	3
Phenyl Mercuric Oleate 10 Per Cent	0 to 2.5
Wetting Agent	0 to 14
	1291.2 to 1599.7

PV ± 26 Per Cent
Wt./Gal. 12.65 to 15.6 lb.

LEAD-PIGMENTED OIL-LATEX PRIMERS

Basic silicate white lead is also exhibiting, under accelerated test conditions, the same stain control and corrosion inhibiting properties in oil-latex primers. These paints, when formulated with sufficient oil length, are showing performance characteristics equivalent to those obtained with the use of the pigmented oil-alkyd additives. The formulation of the oil-latex primer, however, demands some caution since the addition of emulsifying agents, necessary for stabilizing oil in the latex primer, frequently causes water sensitivity of the latex paint film.

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Suggested Copy for Lead
Pigments Report No. 2TEST RESULTS PROMISING

Exposure tests of these systems up to now have been too limited to be conclusive but they do give evidence of good performance and the data correlate very well with the results of accelerated testing. The lead pigmented additives and latex-oil primers have shown good package stability when properly formulated.

If you are now developing a completely water reducible latex house paint system, why not consider the advantages that lead compounds may offer? Why not test them in your own formulations? For further details on these and other advances in lead pigment technology, write to: Lead Pigments Technical Committee, Lead Industries Association, Inc., 292 Madison Avenue, New York 17, N.Y.