

LEAD INDUSTRIES ASSOCIATION

480 LEEDINGTON AVENUE

NEW YORK 17, N. Y.

Pigments and Chemicals Division

November 10, 1954

SUBJECT: RED LEAD TECHNICAL
LETTER NO. 9

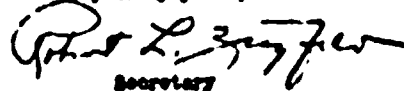
To Members of the Pigments and Chemicals Division:

Enclosed is a copy of the most recent Red Lead Technical Letter. This Letter has been mailed to approximately 12,000 individuals on the following mailing lists:

Paint Production Clubs
National Paint, Varnish and Lacquer Association
National Association of Corrosion Engineers
Agricultural Instructors, Engineers, and County Agents
Miscellaneous

You may want to distribute quantities of this latest Technical Letter to members of your Sales Department. We have several hundred copies available for this purpose.

Very truly yours,



Secretary



RED LEAD PAINTS for GALVANIZED STEEL, RUSTED, WEATHERED or TREATED NEW

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Red Lead Technical Committee
LEAD INDUSTRIES ASSOCIATION
430 LEXINGTON AVENUE
New York 17, N. Y.

Foreword

THE formulations contained in this Technical Letter were developed by the Red Lead Technical Committee to meet the requirements for the protection of rusted or weathered galvanized steel as well as new galvanized steel that has been treated.

The problem created by the general practice of weathering galvanized steel until corrosion has commenced demands special paints to stop and to prevent further deterioration.

The Red Lead Technical Committee, after several years of exposures on many experimental coatings, has developed a number of red lead paints which it believes are superior for this service. They are versatile in that they serve as active anti-corrosive paints for rusted or weathered galvanized surfaces or as protective coatings for properly pretreated new galvanized steel. Depending upon selection they serve as decorative coatings as well.

The formulations contained in the Technical Letter are offered in two groups—one coat finishes and primers for use under selected compatible top-coats.

Inquiries on these formulations or on specific painting problems are welcome and should be addressed to the Lead Industries Association or to the designated individuals in the member companies listed below.

THE EAGLE-PHONIX COMPANY

American Building, Cincinnati 2, Ohio

For technical information write Paul Whitford at above address.

Chicago, Cleveland, Dallas 28, Detroit, Kansas City 6, (Mo.), New Orleans, New York 17, Philadelphia 4, Pittsburgh 22. On the Pacific Coast: Associated Lead and Zinc Company, Seattle 4, Los Angeles 21, San Francisco 7.

W. F. FULLER & COMPANY

301 Mission Street, San Francisco 1, California

For technical information write P. J. Kullberg at above address.

Baton, Baton, Fresno, Los Angeles, Oakland, Phoenix, Portland (Ore.), Sacramento, Salt Lake City, San Diego, Seattle, Spokane, Tacoma, Yakima (Wash.)

THE GLEASON COMPANY

1396 Union Commerce Building, Cleveland 14, Ohio

For technical information write G. F. Shobe at above address.

Atlanta, Boston, Minneapolis, New York, South Hackensack (N. J.), San Francisco, Adams & Elting Division, Chicago, American Paint Works Division, New Orleans, Campbell Paint & Varnish Division, St. Louis, Noble Paint & Varnish Division, Chicago, A. Williams Company Division, Reading, Conoco Division, Tennessee, Chromalox, Pigments & Metals Division, Baltimore, Colmanite (Ill.), Hammond, (Ind.), Eastern Lead Company, Scranton.

HAMMOND LEAD PRODUCTS, INC.

5321 Melman Avenue, Hammond, Indiana

636 Lexington Avenue, New York 17, N. Y.

For technical information write J. G. Johnson at Hammond, Indiana.

NATIONAL LEAD COMPANY

111 Broadway, New York 6, N. Y.

For technical information write George Stedman at above address.

Atlanta, Buffalo 2, Chicago 2, Cincinnati 2, Cleveland 12, Dallas 2, Philadelphia 22, Pittsburgh 12, St. Louis 1, San Francisco 10, National Lead Company of Mass., Boston 2.

WESTERN LEAD PRODUCTS COMPANY

4830 E. Pacific Way, Los Angeles 22, California

1224 Fourth Street, Berkeley 2, California

For technical information write Thomas S. Hale at Los Angeles, California.

RED LEAD PAINT FORMULATIONS FOR GALVANIZED STEEL, RUSTED, WEATHERED, OR TREATED NEW

For One Coat Application

THE following three formulations are recommended for use where no additional coating is to be applied. Formulation 9-3 is included for use where a gross finish is desired.

FORMULA 9-1

Composition	Pounds	Pounds	Gallons
PIGMENT: Red Lead, 97% Grade	28.0	281.0	8.0
Silicon Iron Oxide, 98% FeO ₂	13.0	284.0	8.0
Aluminum Oxide	0.5	0.5	1.5
*Zinc Dust (Fed. Spec. TT-S-694)	54.5	1079.0	10.0
	100.00		
VEHICLE: Raw Linseed Oil	40.0	241.0	21.1
Ahyd Resin Solution (Fed. Spec. TT-S-694, Type I, Class A)	54.5	108.0	21.8
Methyl Spirit	15.0	70.1	11.7
Lead Naphthenate (50%)	0.5	6.4	0.5
Cobalt Oxide (50%)	0.4	0.4	0.0
	100.00	547.9	100.0

Pigment = 98%
Vehicle = 50%
Wt./Vol. = 10.0 lbs. (without zinc dust)
PV = 40.0

*Zinc dust is to be packaged separately and mixed with paint at time of use.

FORMULA 9-2

Composition	Pounds	Pounds	Gallons
PIGMENT: Red Lead, 97% Grade	28.0	287.0	8.0
Silicon Iron Oxide, 98% FeO ₂	13.0	106.0	8.0
Aluminum Oxide	0.5	0.5	1.5
*Zinc Dust (Fed. Spec. TT-S-694)	54.5	705.0	12.0
	100.00		
VEHICLE: Ahyd Resin Solution (Fed. Spec. TT-S-694, Type I, Class A)	40.0	207.0	20.0
Methyl Spirit	54.5	106.0	20.7
Lead Naphthenate (50%)	0.5	5.0	0.5
Cobalt Oxide (50%)	0.30	1.0	0.0
	100.0	1000.0	100.0

Pigment = 98%
Vehicle = 50%
Wt./Vol. = 10.0 lbs. (without zinc dust)
PV = 40.0

*Zinc dust is to be packaged separately and mixed with paint at time of use.

FORMULA 9-B

For use where a green finish is desired.

Ingredients			
PERCENT	Parts by Weight	Parts by Volume	Parts by Measure
Red Lead, 97% Grade	40.0	71.0	1 1/2
Chromium Oxide	10.0	50.0	1 1/2
Aluminum Oxide	0.5	0.5	1/2
*Zinc Dust (Fed. Spec. TT-S-595)	40.0	71.0	1 1/2
	100.0		
VEHICLE: Raw Linseed Oil	47.5	90.0	2 1/2
Alkyd Resin Solution (Fed. Spec. TT-S-595, Type 4, Class A)	54.5	170.0	2 1/2
Miscellaneous Solvents	17.5	90.0	2 1/2
Lead Methylene (245)	0.25	0.5	1/2
Cobalt Oxide (25)	0.25	1.0	1/2
	100.0	300.0	10 1/2

Percent = 77.45
 Volume = 22.55
 Wt./Vol. = 12.1 lb. (without zinc dust)
 PV = 88.5

*Zinc dust is to be packaged separately and mixed with paint at time of use.

To insure good adhesion and to attain the most satisfactory protection from coatings applied to new galvanized steel, the surface should be allowed to weather for 3 to 6 months or, if time does not permit, the surface should be chemically pretreated.

The Technical Committee has examined a number of commonly known pretreatment procedures and found, for example, that treatments with copper sulphate, acetic acid, or hydrochloric acid are ineffective. However, phosphate treatments such as Litholene effectively roughen the zinc surface and greatly improve the adhesion of the paint film.

For Application Where a Top Coat is to be Used

The following two formulations are designed as primers where a top coat is to be applied.

FORMULA 9-4

	Percent	Pounds	Gallons
PRIMER: Red Lead, 97% Grade	80.0	1007.0	11.0
Aluminum Sulfate	0.5	0.5	1.5
*Zinc Dust (Fed. Spec. TT-S-584)	49.5	907.0	17.0
	130.0		
VEHICLE: Raw Linseed Oil	41.5	300.0	30.7
Alkyd Resin Solution (Fed. Spec. TT-S-584, Type I, Class A)	52.75	100.0	21.0
Mineral Spirits	10.00	101.0	11.0
Lead Naphthenate (94%)	0.27	4.5	0.5
Cobalt Octoate (6%)	0.20	2.0	0.2
	104.0	507.4	100.1

Pigment = 72.75
Vehicle = 52.95
Wt./Vol. = 12.4 lbs. (without zinc dust)
PV = 41.4

*Zinc dust is to be packaged separately and mixed with paint at time of use.

FORMULA 9-5

	Percent	Pounds	Gallons
PRIMER: Red Lead, 97% Grade	80.0	712.0	8.7
Aluminum Sulfate	0.5	7.0	0.8
*Zinc Dust (Fed. Spec. TT-S-584)	49.5	712.0	12.1
	130.0		
VEHICLE: Alkyd Resin Solution (Fed. Spec. TT-S-584, Type I, Class A)	57.7	300.0	30.1
Mineral Spirits	31.40	100.0	17.7
Lead Naphthenate (94%)	0.20	2.0	0.4
Cobalt Octoate (6%)	0.25	1.4	0.2
	100.0	501.0	100.0

Pigment = 71.25
Vehicle = 58.25
Wt./Vol. = 14.5 lbs. (without zinc dust)
PV = 41.5

*Zinc dust is to be packaged separately and mixed with paint at time of use.

Although the formulations contained in this Technical Letter have been established by our Red Lead Technical Committee through careful evaluation, no guarantee of results is made or implied. Users are urged to make additional confirmatory evaluations to meet their specific requirements.

The Lead Industries Association and its member companies will be glad to give further information on metal protection paints or to assist on other paint problems.