

LEAD INDUSTRIES ASSOCIATION

480 LEXINGTON AVENUE

NEW YORK 17, N. Y.

Pigments and Chemicals Division

September 2, 1954

**SUBJECT: RED LEAD TECHNICAL
COMMITTEE MEETING**

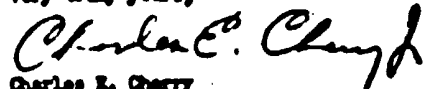
To Members of the Red Lead Technical Committee:

A meeting of the Red Lead Technical Committee will be held on Thursday, September 16, 1954 in the offices of the Lead Industries Association. The meeting will commence at 9:30 A.M.

A tentative agenda for this meeting follows:

1. Final revision for publication of Technical Letter No. 9, Red Lead Paints For Rusted, Weathered or Treated Hot Galvanized Steel.
2. Progress report or re-run of Project 20.
3. Report on division exhibit possibilities for coming year.
4. Exposure test for Blakled.
5. Suggestions for new technical letter and projects.

Very truly yours,

Charles E. Cherry
Secretary to Committee.

NOVEMBER, 1954

Red Lead Technical Letter No. 9

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

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RED LEAD PAINT FORMULATIONS FOR RUSTED, WEATHERED, OR TREATED NEW, GALVANIZED STEEL.....	
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Red Lead Technical Committee

LEAD INDUSTRIES ASSOCIATION
420 LEXINGTON AVENUE
New York 17, N. Y.

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FOREWORD

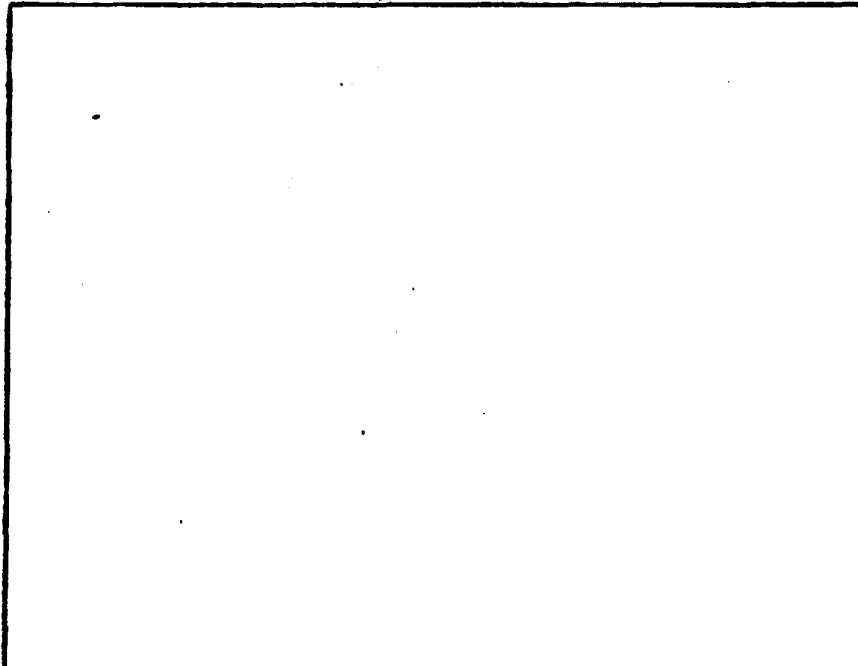
The formulations contained in this Technical Letter were developed by the Red Lead Technical Committee to meet the requirements for the protection of rusted or weathered galvanized steel as well as new galvanized steel that has been treated.

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.



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

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 green finish is desired.

Formula 9-1

<u>Composition</u>	<u>Percent</u>	<u>Pounds</u>	<u>Gallons</u>
PIGMENT: Red Lead, 97% Grade.....	30.0	591.0	8.0
Siliceous Iron Oxide, 85% Fe ₂ O ₃	15.0	295.0	8.0
Aluminum Stearate.....	0.5	9.8	1.2
SiMac Dust (Fed. Spec. TT-2-291) ...	2.5	1070.0	18.2
	100.0		
VEHICLE: Raw Linseed Oil.....	49.0	241.0	31.1
Alkyd Resin Solution (Fed. Spec. TT-B-266, Type I, Class A).....	24.2	168.0	21.3
Mineral Spirits.....	15.5	76.1	11.7
Lead Naphthenate (24%).....	0.9	4.4	0.5
Cobalt Octoate (6%).....	0.4	2.0	0.3
	100.0	2457.3	100.3

Pigment = 80%

Vehicle = 20%

Wt./Gal. = 16.9 lbs. (without zinc dust)

PV = 43.3

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

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Formula 9-2

<u>Composition</u>	<u>Percent</u>	<u>Pounds</u>	<u>Gallons</u>
PIGMENT: Red Lead, 97% Grade.....	30.0	367.0	5.2
Siliceous Iron Oxide, 85% Fe ₂ O ₃	15.0	193.0	5.2
Aluminum Stearate.....	0.5	6.5	0.8
Zinc Dust (Fed. Spec. TT-L-291).....	54.5	705.0	12.0
	100.0		
VEHICLE: Alkyd Resin Solution (Fed. Spec. TT-R-266, Type I, Class A).....	65.0	367.0	46.5
Mineral Spirits.....	34.2	193.0	29.7
Lead Naphthenate (24%).....	0.57	3.3	0.3
Cobalt Octoate (6%).....	0.23	1.3	0.2
	100.0	1856.1	99.9

Pigment = 69.6%

Vehicle = 30.4%

Wt./Gal. = 13.1 lbs. (without zinc dust)

PV = 43.5

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

Formula 9-3

For use where a green finish is desired.

<u>Composition</u>	<u>Percent</u>	<u>Pounds</u>	<u>Gallons</u>
PIGMENT: Red Lead, 97% Grade.....	40.0	712.0	9.6
Chromium Oxide.....	19.5	348.0	8.2
Aluminum Stearate.....	0.5	9.0	1.1
Zinc Dust (Fed. Spec. TT-L-291).....	40.0	712.0	12.1
	100.0		
VEHICLE: Raw Linseed Oil.....	47.8	219.0	32.2
Alkyd Resin Solution (Fed. Spec. TT-R-266, Type I, Class A).....	34.2	178.0	22.5
Mineral Spirits.....	17.2	89.5	13.8
Lead Naphthenate (24%).....	0.58	3.2	.3
Cobalt Octoate (6%).....	0.22	1.2	.2
	100.0	2301.9	100.0

Pigment = 77.4%

Vehicle = 22.6%

Wt./Gal. = 18.1 lbs. (without zinc dust)

PV = 39.8

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

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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

<u>Composition</u>	<u>Percent</u>	<u>Pounds</u>	<u>Gallons</u>
PigMENT: Red Lead, 97% Grade.....	50.0	1007.0	13.6
Aluminum Stearate.....	0.5	9.9	1.2
*Zinc Dust (Fed. Spec. TT-2-291).....	49.5	997.0	17.0
	100.0		
VEHICLE: Raw Linseed Oil.....	46.5	238.0	30.7
Alkyd Resin Solution (Fed. Spec. TT-R-266, Type I, Class A).....	32.75	168.0	21.3
Mineral Spirits.....	19.50	101.0	15.5
Lead Naphthenate (24%).....	0.87	4.5	.5
Cobalt Octoate (6%).....	0.38	2.0	.3
	100.0	2527.4	100.1

Pigment = 79.7%

Vehicle = 20.3%

Wt./Gal. = 18.4 (without zinc dust)

PV = 41.4

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

Formula 9-5

<u>Composition</u>	<u>Percent</u>	<u>Pounds</u>	<u>Gallons</u>
PigMENT: Red Lead, 97% Grade.....	50.0	719.0	9.7
Aluminum Stearate.....	0.5	7.0	0.8
*Zinc Dust (Fed. Spec. TT-2-291).....	49.5	712.0	12.1
	100.0		
VEHICLE: Alkyd Resin Solution (Fed. Spec. TT-R-266, Type I, Class A).....	67.7	388.0	49.1
Mineral Spirits.....	31.42	180.0	27.7
Lead Naphthenate (24%).....	0.63	3.6	.4
Cobalt Octoate (6%).....	0.25	1.4	.2
	100.0	2011.0	100.0

Pigment = 71.5%

Vehicle = 28.5%

Wt./Gal. = 14.8 lbs. (without zinc dust)

PV = 41.5

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

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To insure good adhesion and to attain the most satisfactory protection from coatings applied to new galvanized iron, 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 Lithoform effectively roughen the zinc surface and greatly improve the adhesion of the paint film.

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 protective paints or to assist on other paint problems.