PAINTING SPECIFICATIONS

IONS

CTS

FICATIONS

NL I 002228

I 002230

N 3853

SECTION A • PART II • MATERIALS

12. GENERAL

All materials for painting shall be delivered at the building in unbroken packages, bearing the manufacturer's brand and name, and shall be used without adulteration.

The following materials are covered in these Specifications: White-lead, colors in oil, linseed oil, Lead Mixing Oil, flatting oil, wall primer, turpentine, drier, varnish, shellac varnish, putty, and red-lead.

13. MIXING

All paint shall be mixed on the job in a manner to ensure proper incorporation of the ingredients and in conformity with formulas as given hereinafter.

14. MATERIALS

(a) **White-Lead**—All white-lead shall be pure white-lead of Dutch Boy brand which conforms to the latest specifications of the American Society for Testing Materials.

(b) **Red-Lead**—All red-lead shall be pure red-lead of Dutch Boy brand which conforms to the latest specifications of the American Society for Testing Materials.

(c) **Colors in Oil**—All colors in oil shall be of Dutch Boy brand.

(d) **Linseed Oil**—All linseed oil shall be pure linseed oil of Dutch Boy brand which conforms to the latest specifications of the American Society for Testing Materials.

(e) **Lead Mixing Oil**—All lead mixing oil shall be Dutch Boy Lead Mixing Oil.

(f) **Flatting Oil**—All flatting oil shall be Dutch Boy flatting oil.

(g) **Wall Primer**—All wall primer shall be Dutch Boy wall primer.

(h) **Turpentine**—All turpentine shall be pure gum spirits of turpentine or pure steam-distilled turpentine and shall conform to the latest specifications of the American Society for Testing Materials.

(i) **Drier**—All drier used shall be pure drier of Dutch Boy brand which conforms to Type I of Federal Specifications for liquid paint drier TT-D-651.

(j) **Varnish**—All varnish shall be the best grade of floor varnish, the product of an approved manufacturer and suitable for mixing with white-lead as specified.

(k) **Shellac Varnish**—All shellac varnish shall be free from resin and composed of pure gum shellac cut in pure denatured alcohol, using four pounds of gum to the gallon.

(l) **Putty**—Putty shall be composed of pure white-lead and whiting, mixed with pure linseed oil to proper consistency, and shall conform to white-lead whiting putty, Class B, of the latest specifications of the American Society for Testing Materials. For metal sashes, the pigment may include 10% powdered litharge.

SECTION B • APPLICATION

1. PAINTING EXTERIOR WOOD & SHINGLES

New Surfaces

(a) (Here list and describe surfaces to be painted.)

(b) Door and window casings, mullions, etc. shall be sanded to remove loose edges left by molding machines. All surfaces shall be free from dirt, splinters, etc.

(c) After priming coat is dry, knots and sappy streaks shall receive one coat of shellac varnish brushed over them and all cracks, nail holes, etc. shall be puttied with white-lead putty.

(d) All painting work shall be allowed to dry from four to six days before the next coat is applied.

(e) All surfaces, except shingles, shall be primed with Formula No. 1 and receive two additional coats, using Formulas No. 2 and No. 3, respectively.

(f) Wood shingles shall be primed with Formula No. 4 and receive two additional coats, using Formula No. 5 for the second coat and Formula No. 6, gloss finish; or 7, flat finish, for the finishing coat.

(g) Where colors other than white are to be used, the necessary tinting materials shall be added to the last two coats of paint. (Specifications of colors and where they are to be used should be stated here.)

Repainting

(h) (Here list and describe surfaces to be painted.)

(i) (If any portions of old paint must be removed and surface reprimed, here list and describe such surfaces and their treatment.)

(j) After the first coat has dried sufficiently, nail holes, cracks, etc. shall be puttied with white-lead putty.

(k) All painting work shall be allowed to dry from four to six days before the next coat is applied.

(l) All surfaces, except shingles, shall receive two coats of paint, using Formulas No. 8 and No. 3, respectively.

(m) Wood shingles that are to be repainted shall receive two coats of paint, using Formula No. 9 for the first coat and Formula No. 6 gloss finish; or 7, flat finish for the finishing coat.

(n) Where colors other than white are to be used, the necessary tinting materials shall be added to both coats of paint. (Specifications of colors and where they are to be used should be stated here.)

FORMULAS

[illegible]	Formula No. 1	Formula No. 2	Formula No. 3	Formula No. 4	Formula No. 5	Formula No. 6	Formula No. 7	Formula No. 8	Formula No. 9
[illegible]	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.	[illegible]
[illegible]	4 gals.	1½ gals.	3¾ gals.	4 gals.	3 gals.	3¾ gals.	......	3 gals.	[illegible]
[illegible]	......	......	......	......	......	......	[illegible]	......	......
[illegible]	2 gals.	1½ gals.	......	2 gals.	1 gal.	......	......	2 gals.	[illegible]
[illegible]	1 pint	1 pint	1 pint	1 pint	1 pint	1 pint	......	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

Two-Coat Painting on New Exterior Wood*

(o) (Here list and describe surfaces to be painted.)

(p) Door and window casings, cornices, etc. shall be [illegible]. All surfaces shall be free from dirt, splinters, etc.

(q) Before priming coat is applied, knots and sappy streaks shall receive one coat of shellac varnish brushed out thin.

(r) After priming coat is dry, all cracks, nail holes, etc. shall be puttied with white-lead putty.

(s) All painting work shall be allowed to dry from four to six days before the next coat is applied.

(t) All surfaces shall receive two coats of paint, using Formulas No. 10 and No. 11, respectively.

(u) Where colors other than white are to be used, the necessary tinting materials shall be added to the last coat of paint. (Specifications of colors and where they are to be used should be stated here.)

Materials	Formula No. 10	Formula No. 11
Dutch Boy white-lead	100 lbs.	100 lbs.
Dutch Boy linseed oil	1½ gals.	[illegible] gals.
Pure turpentine	½ gal.	......
Spar varnish	[illegible] gal.	......
Dutch Boy liquid drier	1 pint	1 pint
Dutch Boy raw umber	½ pint	......
Gallons of paint produced	[illegible]	[illegible]
Sq. ft. covered per gal. 1 coat	[illegible]	[illegible]

HEAVY PASTE—Above formulas are based on the use of soft paste white-lead. If heavy paste is used, add 1 quart of turpentine to all formulas.
BOILED LINSEED OIL—If boiled linseed oil is used, omit drier called for in formulas.
*The best and strongly recommended practice is three coats of paint on new wood. However, for [illegible] work [illegible].

2. PAINTING BRICK, STUCCO, STONE & CONCRETE

Brick

(a) (Here list and describe surfaces to be painted.)

(b) Unpainted Brick—All Types—shall be brushed vigorously with a wire brush to remove efflorescence or other foreign substances. If any mortar has become loose or damaged, all such places shall be pointed with mortar before paint is applied. After priming, small defects in the surface should be corrected with putty.

(c) Unpainted Brick—All Types—which has not been allowed to age for a period of six months or longer, shall be treated with a solution made by dissolving two pounds of zinc sulphate in one gallon of water. After the zinc sulphate solution has been applied, sufficient time shall be allowed for drying before priming.

(d) Unpainted Brick—Common Type—shall be primed with Formula No. 18, and shall receive two additional coats, using Formula No. 18 for the second coat and Formula No. (14, flat finish; or 15, gloss finish) for the finishing coat.

(e) Unpainted Brick—Face or Hard-burned Type—shall be primed with Formula No. 16 and shall receive two additional coats, using Formula No. 17 for the second coat and Formula No. (14, flat finish; or 15, gloss finish) for the finishing coat.

(f) Previously Painted Brick—All Types—if previously painted with properly designed oil paint shall be dry brushed before painting. If the old paint is blistered, cracking or scaling, the surfaces should be brushed vigorously with a wire brush before painting. Any bare spots, where previous paint has been completely removed shall receive a priming coat, using Formula No. 18.

The surface shall then receive two coats of paint, using Formula No. 18 for the first coat and Formula No. (14, flat finish; or 15, gloss finish) for the finishing coat. Ample time shall be allowed to elapse between coats for drying and hardening.

If the old paint was a water paint, the entire surface shall be brushed vigorously with a wire brush before painting.

The surface shall then receive three coats of paint, using Formula No. 18 for the priming coat, followed by Formula No. 19 for the second coat and Formula No. (14, flat finish; or 15, gloss finish) for the finishing coat.

(g) (If brick is to be lined, it should be so specified here.)

(h) Where colors other than white are to be used, the necessary tinting materials shall be added to the last two coats of paint. (Colors and where they are to be used should be stated here.)

Stucco, Stone and Concrete

(i) (Here list and describe surfaces to be painted.)

(j) Unpainted Stucco or Concrete—which has not been allowed to age for a period of six months or longer, shall be treated as specified in Section 3(c).

(k) Unpainted Exterior Stucco, Stone or Concrete Surfaces—shall be primed with Formula No. 18 and shall receive two additional coats, using Formula No. 19 for the second coat and Formula No. (14, flat finish; or 15, gloss finish) for the finishing coat.

(l) Previously Painted Stucco, Concrete, or Stone Surfaces—If previously painted with properly designed oil paint, shall be dry-brushed before painting. If the old paint is blistered, cracking or scaling, the surfaces shall be brushed vigorously with a wire-brush before painting. Any bare spots, where previous paint has been completely removed shall receive a priming coat, using Formula No. 18. The surface shall then receive two coats of paint, using Formula No. 18 for the first coat and Formula No. (14, flat finish; or 15, gloss finish) for the finishing coat.

If the old paint was a water paint, the entire surface shall be brushed vigorously with a wire brush before painting.

The surface shall then receive three coats of paint, using Formula No. 18 for the priming coat, followed by Formula No. 19 for the second coat and Formula No. (14, flat finish; or 15, gloss finish) for the finishing coat.

(m) Interior Brick, Stucco, Stone or Concrete Surfaces—should be painted the same as interior plaster. See Page 6.

(n) Where colors other than white are to be used, the necessary tinting materials shall be added to the last two coats of paint. (Colors and where they are to be used should be stated here.)

Materials	Formula No. 12	Formula No. 13	Formula No. 14	Formula No. 15	Formula No. 16	Formula No. 17	Formula No. 18	Formula No. 19
Dutch Boy white-lead	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.
Dutch Boy linseed oil	5 gals.	3 gals.	......	[illegible] gals.	4 gals.	[illegible] gals.	[illegible] gals.	......
Dutch Boy Lead Mixing Oil	......	......	4 gals.	......	......	......	[illegible] gals.	3 to 6 gals.
Pure turpentine	½ gal.	1 gal.	......	......	½ gal.	1 gal.	......	......
Dutch Boy liquid drier	1 pint	1 pint	......	1 pint	1 pint	1 pint	......	......
Gallons of paint produced	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] to [illegible]
Sq. ft. covered per gal. 1 coat	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

HEAVY PASTE—Above formulas are based on the use of soft paste white-lead. If heavy paste is used, add 1 quart of turpentine to all formulas except [illegible]. BOILED LINSEED OIL—If boiled linseed oil is used, omit drier called for in formulas.

3. PAINTING INTERIOR PLASTER

(a) (Here list and describe surfaces to be painted.)

(b) Before any paint is applied, plaster surfaces, either new or old, shall be made clean and smooth.

(c) All cracks and holes shall be filled with plaster of paris or approved patching plaster. Large cracks before filling shall be opened up in dovetail shape clear to the lath and soaked with water. The filling plaster shall be leveled off even with the adjoining plaster surfaces, and when dry shall be sandpapered smooth.

(d) Walls that have been calcimined shall be washed until all calcimine is removed before applying any paint.

(e) Where new plaster to be painted is not properly aged, the surfaces shall be treated with a solution made by dissolving two pounds of zinc sulphate in one gallon of water. After the zinc sulphate solution has been applied, sufficient time shall be allowed for the plaster to dry before priming.

(f) All plaster (also wall board or fabric coverings) not previously painted shall be primed with Dutch Boy Wall Primer (or Formula No. 20) and shall receive two additional coats, using Formula No. 21 for the second coat and Formula No. 21 (flat finish; 22 (or 23) special flat finish for stippling; or 24, eggshell finish) for the finishing coat. (Surfaces previously painted do not require the priming coat.)

(g) (If a gloss finish is wanted on interior plaster, specify a prepared enamel for the third or finish coat.)

(h) Where colors other than white are to be used, the necessary tinting materials shall be added to the last two coats of paint. (Specifications of colors and where they are to be used as well as any instructions as to special decorative finishes should be stated here.)

FORMULAS

Materials	Formula No. 20*	Formula No. 21	Formula No. 22	Formula No. 23	Formula No. 24
Dutch Boy white-lead	100 lbs.	100 lbs.	100 lbs.	100 lbs.	50 lbs.
Dutch Boy Lead Mixing Oil	**4 to 5 gals.	**3 to 4 gals.	2 gals.	......	1½ gals.
Dutch Boy flatting oil	......	......	......	1½ gals.	......
Dutch Boy Wall Primer	......	......	......	......	3 gals.
Gallons of paint produced	7¼ to 8¼	6½ to 7¼	5¾	6¾	6½
Sq. ft. covered per gal., 1 coat	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

*Dutch Boy wall primer should always be specified instead of this formula when walls are extremely porous or in an otherwise poor condition.
**The maximum amount of Lead Mixing Oil should be used when the maximum amount of hiding is wanted.

4. PAINTING FLOORS

Wood Floors

(a) (Here list and describe surfaces to be painted.)

(b) All wood floors shall be cleaned and sandpapered smooth before painting. If the old paint on a previously painted floor is in bad condition, it should be removed by planing, scraping or by the use of a liquid paint remover.

(c) All work shall be allowed to dry for at least four days before the next coat is applied.

(d) All floors not previously painted, or from which the paint has been removed, shall be primed with Formula No. 25, and shall receive two additional coats, using Formulas No. 26 and 27 respectively.

(e) All floors previously painted shall be touched up on worn places using Formula No. 26, after which they shall receive two coats, using Formulas No. 26 and 27 respectively.

(f) (Specifications of colors should be stated here. The necessary tinting materials should be added to the last two coats.)

(g) Undersides of all new porch floors and the tongued and grooved edges of the boards shall receive one coat, using Formula No. 28.

Concrete Floors

(h) New concrete floors shall be aged at least six months before being painted. If necessary to paint before that time, they may be aged artificially by washing with a solution of two pounds of zinc sulphate to a gallon of water.

(i) Previously painted concrete floors shall be wire-brushed to remove all loose paint.

(j) All work shall be allowed to dry at least four days before the next coat is applied.

(k) Unpainted concrete floors shall be primed with Formula No. 29 and receive two additional coats, using Formula No. 30 for the second coat and a high grade floor enamel for the finishing coat. (Previously painted floors do not require the priming coat.)

(l) The undercoat of paint shall be brought to an approximate match with the desired finish coat color by the addition of the necessary tinting materials. (Specifications of colors should be stated here.)

FORMULAS

Materials	Formula No. 25	Formula No. 26	Formula No. 27	Formula No. 28	Formula No. 29	Formula No. 30
Dutch Boy white-lead	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.	100 lbs.
Dutch Boy linseed oil	*3 gals.	½ gal.	½ gal.	3½ gals.	2½ gals.	½ gal.
Dutch Boy Lead Mixing Oil	......	......	......	......	2½ gals.	......
Pure turpentine	3 gals.	3½ gals.	½ gal.	......	......	3½ gals.
Floor varnish**	......	......	1 gal.	......	......	......
Dutch Boy liquid drier	1 pint	½ pint	½ pint	1 pint	......	½ pint
Gallons of paint produced	5¾	6	5¾	6¾	5¾	6
Sq. ft. covered per gal., 1 coat	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

*If the floor is of hardwood, reduce the linseed oil to 2½ gallons.
**If the floor is not exposed to the weather use floor varnish instead of spar varnish.
HEAVY PASTE—Above formulas are based on the use of soft paste white-lead. If heavy paste is used add 1 quart of turpentine to all formulas except No. [illegible].
BOILED LINSEED OIL—If boiled linseed oil is used, omit drier called for in formulas.

5. PAINTING INTERIOR WOOD

(a) (Here list and describe surfaces to be painted.)

(b) New woodwork shall be cut smooth with sandpaper where required and dusted clean before priming.

(c) Old painted or varnished woodwork that shows bad cracking, checking or scaling shall be stripped by means of a good paint and varnish remover, and then cleaned with benzine or turpentine. Woodwork that is greasy or coated with wax should be scrubbed clean with turpentine or benzine before painting.

(d) All nail holes, cracks, dents or other defects shall be filled with white-lead putty after the priming coat has dried.

(e) All unpainted wood, or surfaces from which the paint has been removed completely, shall be primed with Formula No. 31 and shall receive two additional coats, using Formula No. 32 for the second coat and Formula No. (32, flat finish; or 33, semi-gloss finish) for the finish coat. (Previously painted surfaces on which the old paint is in good condition do not require the priming coat.)

(f) (If a gloss finish is wanted on interior wood, specify a prepared enamel for the third or finishing coat.)

(g) Where colors other than white are to be used, the necessary tinting materials shall be added to the last two coats of paint. (Specifications of colors and where they are to be used should be stated here.)

FORMULAS

Materials	Formula No. 31	Formula No. 32	Formula No. 33
Dutch Boy white-lead	100 lbs.	100 lbs.	50 lbs.
Dutch Boy linseed oil*	3 gals.	......	......
Dutch Boy Lead Mixing Oil	......	3 to 4 gals.	1½ gals.
Pure turpentine	2 gals.	......	......
Dutch Boy wall primer	......	......	3 gals.
Dutch Boy liquid drier	1 pint	......	......
Gallons of paint produced	8⅝	6¾ to 7¾	6½
Sq. ft. covered per gal. 1 coat	700	[illegible]	[illegible]

*If boiled oil is used omit drier called for in formula.

HEAVY PASTE—Above formulas are based on the use of soft paste white-lead. If heavy paste is used, add one quart of turpentine to Formula No. 31 only.

6. PAINTING METAL

(a) (Here list and describe surfaces to be painted.)

(b) All metal surfaces before priming shall be cleaned thoroughly with steel scrapers, wire brushes or by means of sandblasting where necessary.

(c) Galvanized iron, or all metal surfaces where solder fluxes have been used, shall be carefully washed with mineral spirits (benzine) before any paint is applied.

(d) All metal work to be finished in black or a dark color shall be primed with Formula No. 34 (or Dutch Boy Liquid Red-Lead No. 1). The second coat shall be Formula No. 35 (or Dutch Boy Liquid Red-Lead No. 6). The third coat shall be Formula No. 36 (or Dutch Boy Red-Lead No. 5) or a paint of the color desired.

(e) All metal work to be finished in white or light colors shall be primed with Formula No. 34 (or Dutch Boy Liquid Red-Lead No. 1) and shall receive two additional coats using Formula No. 37 and Formula No. 38 respectively.

(f) Where metal work is to be finished in a light color, the necessary tinting materials shall be added to Formulas No. 37 and 38.

(Specifications of colors and where they are to be used should be stated here.)

NOTE: The red-lead priming coats offered in these specifications are mixed on the basis of 33 pounds of dry red-lead to the gallon of linseed oil. Experience has shown that a primer of this composition gives maximum durability and service, particularly where exposure conditions are severe as in warm, moist climates or near the seacoast. If, however, exposure conditions are not so severe it is frequently possible to use a lighter weight primer containing a lower percentage of pigment and secure perfectly satisfactory results.

For this purpose, National Lead Company offers Pure Red-Lead Paint No. 25 and Pure Red-Lead No. 16. Both are 100% pure red-lead paints, the former mixed on the basis of 25 pounds of dry red-lead to one gallon of vehicle, the latter on the basis of 16 pounds of dry red-lead to one gallon of vehicle.

FORMULAS

Materials	Formula No. 34	Formula No. 35	Formula No. 36	Formula No. 37	Formula No. 38
Dutch Boy red-lead	100 lbs.	100 lbs.	25 lbs.	......	......
Dutch Boy white-lead	...	......	......	100 lbs.	100 lbs.
Dutch Boy linseed oil	1⅝ gals.	1½ gals.	2¾ gals.	1½ gals.	3¾ gals.
Dutch Boy lampblack	...	½ pint	1½ gals.	......	......
Dutch Boy C.P. prussian blue	......	......	½ gal.	......	......
Pure turpentine	1½ pints	1½ pints	3 pints	1½ gals.	......
Dutch Boy liquid drier	1½ pints	1½ pints	3 pints	1 pint	1 pint
Gallons of paint produced	4½	4⅝	6	6⅝	6¾
Weight in pounds per gallon	26.1	23.9	11.6	......	......
Sq. ft. covered per gal., 1 coat	600	600	700	[illegible]	700

HEAVY PASTE: Formulas No. 37 and 38 are based on the use of soft paste white-lead. If heavy paste is used, add 1 quart of turpentine to each formula.

BOILED LINSEED OIL—If boiled linseed oil is used omit drier called for in formulas except for Formula No. 36 where it should be reduced to 2 pints.

6-A. PAINTING METAL WHEN QUICK DRYING IS REQUIRED

Whenever conditions demand quick drying Dutch Boy Quick-Drying Red-Lead should be specified.

Dutch Boy Quick-Drying Red-Lead is a straight red-lead paint weighing 19.5 pounds to the gallon. Its quick drying properties are obtained through the use of a synthetic resin vehicle. It dries for recoating in from two to six hours. It is especially adapted for use in painting ships, water tanks and other equipment which cannot be conveniently kept out of service for an extended period.

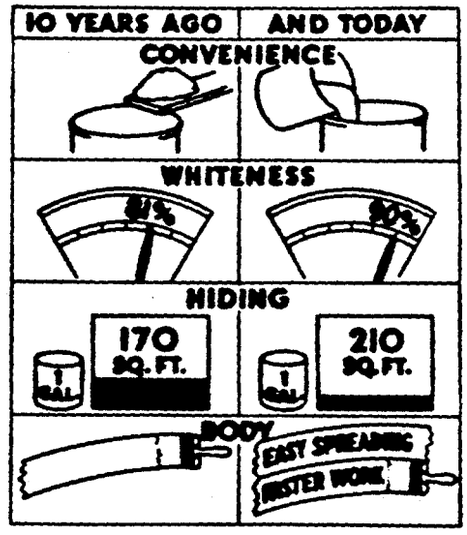
Dutch Boy Quick-Drying Red-Lead dries to a hard, firm, yet elastic film, uniform in thickness. It adheres tightly to metal, holds well the paint coats applied over it, and will stand severe rubbing. On exposure, it is resistant to the softening action of water. It may be used for all coats. For inspection purposes succeeding coats can be tinted to brown by the addition of from ¼ to ½ pint of lampblack per gallon. If the proportion is increased beyond ½ pint to a gallon, the lampblack should be ground in japan.

WHITE-LEAD — THE MODERN PIGMENT

A FEW years ago, studies were made of the paint specifications prepared by architects, engineers, maintenance men and other large buyers and users of paint. The results indicated that "lead and oil" continued — as it had for many years — to be the preferred material in the very large majority of cases.

Undoubtedly, part of the answer for this continuing preference can be summed up in one word — dependability. Pure white-lead, thinned with linseed oil, has been used successfully for so many years that its good performance — when properly mixed and applied to a fit surface — is a practical certainty.

Dependability, however, is not the whole answer. Certainly some measure of this preference can be attributed to the manner in which white-lead has remained in the forefront of modern paint pigments — to the improvements in its paint-mixing and paint-making qualities which accurately reflect proved technological developments and which continue to keep "lead and oil" one of the most easily spread, best hiding and thus most economical paints from the application standpoint.



Approximately ten years ago, an improvement — outstanding because it was so noticeable to the user — was the introduction of Dutch Boy soft paste white-lead. The new paste made mixing a matter of minutes. Painters liked it because it saved them time and money on a job. Those in charge of maintenance painting soon found it stepped up the productive efficiency of the paint crew. Best of all, the "change-over" to a softer paste form better suited to modern requirements involved no alterations in the quality of the product.

In more recent times, another improvement of considerable importance has been an increase in the whiteness of Dutch Boy. To the unpractised observer, of course, white is white and unless it were possible for him to compare the white-lead of ten years ago side by side with the white-lead of today, even a decided increase in intensity might escape him. To the technical paint man, however, the slightest change in color is quickly apparent and — if the change is in the right direction — a matter for rejoicing. He knows that a whiter white-lead will produce finer-looking white paint jobs and brighter, cleaner-looking jobs where the paint is tinted.

In the laboratory, the whiteness of a product such as white-lead is measured in an apparatus called a photometer. A small pile of the dry pigment is placed in position beside a block of pure magnesium oxide. Pure magnesium oxide is the whitest substance known and has the highest light reflective value. It will turn back in the neighborhood of 97% of white light. The whiteness of the lead is calculated by a comparison of its light reflective property with that of the magnesium.

Ten years ago, commercial white-lead examined in a photometer usually reflected about 81% of white light. Today's white-lead will reflect approximately 90%.

Still another improvement, also of recent development, has been an increase in the hiding power of white-lead. The benefits of better hiding make themselves felt through more economical paint work and thus are of special interest and importance to the user. Improved hiding power means that paint goes further. Fewer gallons are required to cover a given area of surface. Better hiding also means more solid-appearing paint jobs.

A common laboratory method of determining the hiding power of white-lead is to thin it to brushing consistency with linseed oil and spread the resulting paint on a smooth black surface. The area that can be completely hidden is an index to the hiding power.

Ten years ago, a gallon of pure white-lead paint, formulated on an exterior gloss coat basis (approximately equal volumes of paste white-lead and linseed oil), would have obscured about 170 sq. ft. of black surface. Today a gallon of Dutch Boy paint formulated on the same basis will hide completely about 210 sq. ft. of the same type of surface — a slightly more than 23% increase.

Greater whiteness and better hiding are what might be called "visual" improvements in white-lead. Another recent improvement which is in a somewhat different category is the increase in the so-called "bodying" or paint-thickening properties of Dutch Boy white lead.

This better body enables the user to add the amount of linseed oil needed to do the right kind of job and still get a full-bodied paint that flows nicely and brushes out smoothly without running or sagging. The finished job has that solid look so characteristic of a properly-formulated and properly-applied white-lead paint. Also, because of its generally better brushing qualities, the painter can apply the paint faster.

In these ways Dutch Boy white-lead has become the modern white-lead, improved in convenience and improved in quality while still retaining those characteristics that have long made it the choice for durability and fine appearance.

MIXING WHITE-LEAD PAINT BY VOLUME

REPAINT WORK

OUTSIDE WOOD

BRICK, STUCCO, CONCRETE AND STONE

INTERIOR PLASTER, WALLBOARD WOODWORK

NEW WORK

OUTSIDE WOOD	INT. WOOD	BRICK	STUCCO, CONCRETE AND STONE	INTERIOR PLASTER AND WALLBOARD
3 Parts	3 Parts	3 Parts	4 Parts	2 Parts
4 Parts	3 Parts	3 Parts	3 Parts	1 Part
3 Parts	2 Parts	1 Part	3 Parts	1 Part

HOW SHOULD PAINT WEAR?

Since all paint must sooner or later lose its ability to protect the surface and improve appearance, it follows that most structures are periodically repainted. The intervals between paintings depend on local conditions, the owner's pride and pocketbook and, of course, the lasting quality of the paint itself.

If we assume that a frame house receives two coats of paint at an average interval of five years, there will have been (including the original three-coat job) twenty-one coats of paint applied before the dwelling reaches its fiftieth birthday. And if every one of these paint coats had kept its original thickness, a mighty thick coating would have been built up—a coating so heavy that the original primer would have a tough time hanging on to the wood. But, with white-lead paint as such heavy, thick, inelastic film is progressively piled up. At the close of each average five-year period, the film will have worn down sufficiently so that each new two-coat job will not pile up a film that eventually might fall of its own weight.

The slow, even wearing-down that is characteristic of pure white-lead paint has other things to recommend it besides that of keeping the film at a safe thickness over a long span of repaintings. One advantage is a so-called self-cleaning property. As the surface of the film slowly chalks the dust and dirt is loosened too, so that wind and rain can effect its removal. Further, the chalking surface requires no expensive preparations before repainting—a quick dusting off is all that is needed. Moreover, this type of surface provides excellent anchorage for the repaint coats—the pigment and vehicle in the fresh paint can get down into the old film.

CLOSE-UP OF A PORCH COLUMN ON WHICH FIFTY-TWO COATS OF DUTCH BOY WHITE-LEAD PAINT HAVE BEEN APPLIED OVER A PERIOD OF YEARS

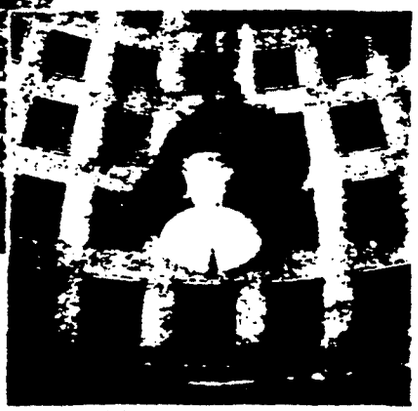
The smooth, gradual wearing away, characteristic of white-lead paint, has prevented the building up of an unattractive chalky and heavy paint coating.

Still another virtue of a paint that wears down slowly as time goes on is that it prevents the building up of a thick coating that blunts and blurs the fine outlines and details of parts of a building. It is not at all uncommon to find stately old residences that have lost much of their original architectural charm simply because close-cut details are smothered with piled-up paint film.

DUTCH BOY PAINTING SPECIFICATIONS

A CEILING THAT HAS BEEN PAINTED AND REPAINTED WITH WHITE-LEAD SINCE 1876.

The fine appearance of surfaces painted consistently with white-lead for many years is proof that white-lead guards against future paint troubles.



WHITE-LEAD PAINT HAS LONG BEEN USED TO PROTECT AND BEAUTIFY BUILDINGS LIKE THIS.

WHITE-LEAD FOR INTERIORS

The paint for interior walls and woodwork should also be selected and specified with an eye to the future. In other words, today's paint should always make a safe foundation for succeeding coats no matter how many nor over how long a period they may be applied.

There are many paint users who have discovered that the paint they selected in good faith today didn't show its true colors for several subsequent repaintings. With white lead there is no need to risk subsequent costly troubles. There are plenty of buildings whose interiors have been white-lead painted for twenty, thirty, forty and more years. White-lead's performance is a matter of recorded history and not one of hopeful prophesy.

Of course, this is just one of the advantages of paint made with Dutch Boy white-lead and Lead Mixing Oil. This paint brings to interiors that solid beauty of finish characteristic of white-lead jobs. With it, the painter can produce any tint or shade of color specified. He can provide also the degree of flatness best for ideal lighting.

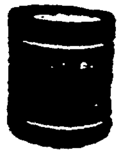
It's a durable paint, too. Where conditions demand a high standard of cleanliness through frequent washing, this paint can "take it." It stands up under even careless scrubbing and harsh soap powders.

RED-LEAD FOR METAL SURFACES

The specifying of paint as a building material must necessarily include the protection of metal surfaces from rust and deterioration. There are few structures today that do not have metal work that needs such protection.

Dutch Boy red-lead has become the standard of efficiency in measuring the life and effectiveness of metal protective paint. Not only does it stick so tight that it becomes almost a part of the surface it covers but, like white-lead, is a long-lasting, economical paint . . . a "true member of the Dutch Boy line."

It is always to the best interests of the architect or engineer, the owner and the structure itself to specify Dutch Boy red-lead paint of the proper type and formulation to fit the job.

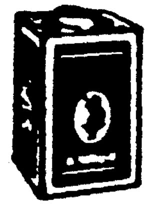


DUTCH BOY WHITE-LEAD

[illegible] ... are sold in 100-lb. steel kegs and 50, 25 and 12½-lb. steel pails.

DUTCH BOY LINSEED OIL

[illegible] ... Both types are sold in 1-gal. and 5-gal. cans.



DUTCH BOY LIQUID DRIER

[illegible]

THE DUTCH BOY LINE

[illegible]

DUTCH BOY COLORS IN OIL

[illegible]

DUTCH BOY WALL PRIMER

[illegible] ... cause it penetrates sufficiently to give proper anchorage. Requires no special thinners or special driers. Sold in 1-qt. and 1-gal. cans and in 5-gal. kits.

DUTCH BOY LEAD MIXING OIL

[illegible] ... Dutch Boy Lead Mixing Oil is available in sealed 1-gal. and 5-gal. cans.

DUTCH BOY RED-LEAD

Just as pure red-lead excels other paint materials as a protective for metal, so does Dutch Boy red-lead—that is, highly-oxidized red-lead containing more than 97% Pb_3O_4—excel other red-leads with a lower true red-lead content. Paint made from highly oxidized red-lead has better keeping qualities. It is easier to apply and has a greater spreading capacity. It produces a uniform film of greater density and thus is more durable and more resistant to destructive atmospheric influences.

Dutch Boy Paste red-lead is red-lead ground in pure linseed oil. Sold in 100-lb. kegs, 50, 25 and 12½-lb. steel pails.

DUTCH BOY LIQUID RED-LEAD

Sold in four types as follows: No. 1 (Orange Red), No. 6 (Light Brown), No. 7 (Dark Brown), No. 5 (Black). All are ready-to-use red-lead paints unexcelled for all metal surfaces exposed to the weather. Sold in 50-gal. drums, 5-gal. kits and 1-qt. and 1-gal. cans.

DUTCH BOY QUICK-DRYING RED-LEAD

This is a special type of red-lead paint designed for use when the available drying time is short. It dries for recoating in from 4 to 6 hours. It contains nothing but pure highly-oxidized red-lead ground in a synthetic resin vehicle. Sold in 50-gal. drums, 5-gal. kits and 1-gal. cans.