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14 March 1946*

Supersedes issue of
17 December 1945

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Specification for

MARINE PAINT, WHITE LEAD - ZINC OXIDE TYPE
WHITE AND TINTED

1. DEFINITION

This specification applies to ready-mixed paint of white lead - zinc oxide base suitable for exterior use on wood or metal, under marine atmospheric conditions.

2. GENERAL

The pigment portion of the paint shall consist substantially of white lead and zinc oxide, together with suitable tinting colors. The vehicle shall be composed of pure linseed oil, and high grade water-resistant varnish and/or bodied oil, with the necessary thinners and driers. The white lead may be either the basic carbonate, the basic sulphate or a mixture thereof.

The paint shall be of brushing consistency and shall dry with a smooth, glossy finish.

3. COLORS

The following standard colors appearing in Schedule No. 1-GP-12 are applicable to paints purchased under this specification:

Grey 1 - 5, 1 - 7, 1 - 8
Blue 2 - 3, 2 - 4
Green 3 - 5
Brown 4 - 1
Cream 6 - 3
Buff 7 - 2
Black 10 - 2

* Reprinted 9 September 1952 with no change in technical requirements and with the incorporation of Correction No. 1 issued 20 June 1946 and Amendments No. 1 and No. 2 issued 13 June 1951 and 30 June 1952 respectively.

PRICE 5 cents.

4. WEIGHT PER GALLON

The weight per gallon shall be not less than 20 lbs.

Method 2.1

5. CONSISTENCY

The consistency of the paint shall be not less than 75 Krebs Units and not more than 100 Krebs Units, as determined with the Stormer Viscosimeter.

Method 4.5

6. HIDING POWER

The paint shall hide a contrasting surface entirely when applied at a coverage of 400 square feet per gallon.

Method 14.1

7. FLASH POINT

The Pensky-Martens closed cup flash point of the paint shall be not lower than 38°C. (100°F.).

Method 3.1

8. DRYING TIME

The paint shall dry in not less than 8, nor in more than 16 hours.

Method 5.1

9. COARSE PARTICLES

The paint shall contain not more than 0.2 per cent of material retained on a 74 micron sieve, nor more than 2.0 per cent retained on a 44 micron sieve.

Method 15.1

10. VOLATILE MATTER

Matter volatile at 105°C. (221°F) shall not exceed 15 per cent by weight of the paint.

Method 17.1

11. WATER

The content of water shall not exceed 0.5 per cent of the paint.

Method 24.1

12. PIGMENT

The content of pigment shall be not less than 65 per cent by weight of the paint.

Method 21.1

13. PIGMENT COMPOSITION

(a) The content of white lead shall be not less than 50 per cent, and that of zinc oxide shall be not less than 30 per cent of the pigment. The total of white lead and zinc oxide shall be not less than 90 per cent of the pigment.

Method 50.6

(b) Sulphur in the form of sulphides shall not exceed 0.1 per cent of the pigment.

Method 68.2

14. WATER RESISTANCE

The dried paint film shall withstand immersion in water at $25 \pm 2^{\circ}\text{C}$. ($58 - 77^{\circ}\text{F}$.) for 8 hours without softening or dulling.

Method 110.1

15. FLEXIBILITY

The dried film shall not crack or peel when subjected to the bending test, using a $1/8$ " mandrel.

Method 119.1

16. DURABILITY AND COLOR STABILITY

The dried paint film shall withstand an exposure period of 15 cycles in an accelerated weathering machine, without showing evidence of chalking, checking, cracking, flaking, or appreciable color change.

Method 122.1

17. METHODS OF SAMPLING AND TESTING

(a) Sampling shall be carried out in accordance with section 1.1 of Schedule No. 1-GP-71: Methods of Testing Paints and Pigments.

(b) The methods of testing shall in all cases be those specified in the same Schedule, using the sections specified in each requirement.

Correspondence regarding this specification should be addressed to the Secretary, Canadian Government Specifications Board, National Research Council, OTTAWA, Canada.

Issued 14 March, 1946*
Superseding Issue of
17 December, 1945.

CANADIAN GOVERNMENT PURCHASING STANDARDS COMMITTEE

Specification for
MARINE PAINT, WHITE LEAD - ZINC OXIDE TYPE
White and Tinted

1. Definition

This specification applies to ready-mixed paint of white lead - zinc oxide base suitable for exterior use on wood or metal, under marine atmospheric conditions.

2. General

The pigment portion of the paint shall consist substantially of white lead and zinc oxide, together with suitable tinting colours. The vehicle shall be composed of pure linseed oil, and high grade water-resistant varnish and/or bodied oil, with the necessary thinners and driers. The white lead may be either the basic carbonate, the basic sulphate or a mixture thereof.

The paint shall be of brushing consistency and shall dry with a smooth, glossy finish.

3. Colours

The following standard colours appearing in Schedule No. 1-GP-12 are applicable to paints purchased under this specification:

No. 0	White	No. 31	Light Grey
No. 1	Sky Blue	No. 32	Dark Grey
No. 2	Turquoise Blue	No. 52	Cream
No. 2-S	Grey	No. 53	Deep Cream
No. 10	Light Brown	No. 61	Fawn
No. 16	Sea Green	No. 64	Ivory
No. 30	Silver Grey		

Method 12.1

4. Weight Per Gallon

The weight per gallon shall be not less than 20 lbs.

Method 2.1

*Issued in present form with no change in the requirements.

2.

No. 1-GP-25.

5. Consistency

The consistency of the paint shall be not less than 20 seconds, nor more than 75 seconds at 25°C. (77°F.), as determined by the Gardner Mobilometer. Method 4.4

6. Hiding Power

The paint shall hide a contrasting surface entirely when applied at a coverage of 400 square feet per gallon. Method 14.1

7. Flash Point

The Pensky-Martens closed cup flash point of the paint shall be not lower than 38°C. (100°F.). Method 3.1

8. Drying Time

The paint shall dry in not less than 8, nor in more than 16 hours. Method 5.1

9. Coarse Particles

The paint shall contain not more than 0.2 per cent of material retained on a 74 micron sieve, nor more than 2.0 per cent retained on a 44 micron sieve. Method 15.1

10. Volatile Matter

Matter volatile at 105°C. (221°F.) shall not exceed 15 per cent by weight of the paint. Method 17.1

11. Water

The content of water shall not exceed 0.5 per cent of the paint. Method 24.1

12. Pigment

The content of pigment shall be not less than 65 per cent by weight of the paint. Method 21.1

13. Pigment Composition

(a) The content of white lead shall be not less than 50 per cent, and that of zinc oxide shall be not less than 30 per cent of the pigment. The total of white lead and zinc oxide shall be not less than 90 per cent of the pigment. Method 50.6

(b) Calcium compounds soluble in dilute acid shall not exceed the equivalent of 1.0 per cent CaO of the pigment.
Method 50.6

(c) Sulphur in the form of sulphides shall not exceed 0.1 per cent of the pigment.
Method 68.2

14. Water Resistance

The dried paint film shall withstand immersion in water at $25 \pm 2^{\circ}\text{C}$. (58 - 77°F.) for 8 hours without softening or dulling.
Method 110.1

15. Flexibility

The dried film shall not crack or peel when subjected to the bending test, using a 1/8" mandrel.
Method 119.1

16. Durability and Colour Stability

The dried paint film shall withstand an exposure period of 15 cycles in an accelerated weathering machine, without showing evidence of chalking, checking, cracking, flaking, or appreciable colour change.
Method 112.1

17. Methods of Sampling and Testing

(a) Sampling shall be carried out in accordance with section 1.1 of Schedule No. 1-GP-71: Methods of Testing Paints and Pigments.

(b) The methods of testing shall in all cases be those specified in the same Schedule, using the sections specified in each requirement.

Correspondence regarding this specification should be addressed to the Secretary, Canadian Government Purchasing Standards Committee, National Research Council, OTTAWA, Canada.