

1-GP-41d
April 1969
CANCELLATION
April 1979

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Specification
for

PAINT: EXTERIOR, LINSEED OIL TYPE, SOLID COLORS

This specification is hereby cancelled. An enquiry into its uses showed that the specification was not required.

The following standards cover products which may be considered as alternatives to that which was formerly covered by 1-GP-41d.

1-GP-28M	Paint, Exterior, Alkyd, House
1-GP-59M	Enamel, Exterior, Gloss, Alkyd Type

This cancellation supersedes the cancellation notice dated December 1978.

1-GP-41d
4 April 1969
AMENDMENT NO. 1
February 1970

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Specification
for

PAINT: EXTERIOR, LINSEED OIL TYPE, SOLID COLORS

Red 400 *af*
19/1/70

5. DETAIL REQUIREMENTS

- 5.14.2 Total Chromium - Delete test method ASTM D126 and insert Method 50.19 under the 1-GP-71 column.
- 5.15 Insert the following paragraph, which was omitted from the specification in error:
- 5.15 Accelerated Storage Stability - When subjected to the accelerated storage test at 140°F (60°C) for 96 hours, the paint shall not gel, liver, curdle or change in viscosity by more than 5 Krebs units, and shall show no evidence of seeding or hard settling. At the end of the heating period the paint shall be readily mixed to a uniform condition by stirring. After heating, the paint shall produce a dry film that is uniform in appearance and free from streaking, mottling and seediness, and the change in gloss shall be not more than 5 units when compared with a film of the untreated paint.

Method 30.3

8. NOTES:

- 8.1 Intended Uses - Change the entire section to read:
- 8.1.1 This paint is intended for general use on new wood that has been properly coated with 1-GP-55 primer, on previously painted wood, and on suitably prepared and primed metals associated with wooden structures. This paint may also be used for topcoating of suitably prepared and primed structural steel.
- 8.1.2 This paint shall not be used on wood floors. 1-GP-73 enamel is recommended for this purpose.
- 8.1.3 This paint is intended for repainting of trim previously painted with oil type paints. For new trim or trim previously painted with enamel, 1-GP-28 Type 2 (Alkyd) paint or 1-GP-59 enamel is recommended.

(OVER)

- 8.1.4 Previously painted wood surfaces should be thoroughly cleaned and one or two coats applied as necessary, when there are no film defects. If blistering, cracking or flaking has occurred, wire brush or scrape areas of failure and spot prime with 1-GP-55 primer before applying the paint.
- 8.1.5 Ferrous metals should first be thoroughly cleaned and coated with 1-GP-14, 1-GP-40 or 1-GP-140 primer prior to application of this paint.
- 8.1.6 New galvanized sheeting should be weathered for one year before painting, but if this is not practical, it should be treated with 1-GP-121 vinyl wash primer or a suitable commercial pretreatment solution. Weathered or treated galvanized sheeting should be primed with 1-GP-40 primer before topcoating with 1-GP-41 paint. 1-GP-178 zinc dust/zinc oxide primer may be used directly on fresh galvanized sheeting, after thoroughly removing dirt and grease with a solvent such as 1-GP-4 mineral spirits, and then topcoated with 1-GP-41 paint.
- 8.1.7 Where attack by fungus is a problem, consideration should be given to the use of fungicides in accordance with the manufacturer's instructions for preparation of the surface and materials to be employed.

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Standard
for

PAINT: EXTERIOR, LINSEED OIL TYPE, SOLID COLORS

5. DETAIL REQUIREMENTS

5.14.2 Total Chromium - Delete test method ASTM D126 and insert Method 50.19 under the 1-GP-71 column.

5.15 Insert the following paragraph, which was omitted from the standard in error:

5.15 Accelerated Storage Stability - When subjected to the accelerated storage test at 140°F (60°C) for 96 hours, the paint shall not gel, liver, curdle or change in viscosity by more than 5 Krebs units, and shall show no evidence of seeding or hard settling. At the end of the heating period the paint shall be readily mixed to a uniform condition by stirring. After heating, the paint shall produce a dry film that is uniform in appearance and free from streaking, mottling and seediness, and the change in gloss shall be not more than 5 units when compared with a film of the untreated paint.

Method 30.3

8. NOTES:

8.1 Intended Uses - Change the entire section to read:

8.1.1 This paint is intended for general use on new wood that has been properly coated with 1-GP-55 primer, on previously painted wood, and on suitably prepared and primed metals associated with wooden structures. This paint may also be used for topcoating of suitably prepared and primed structural steel.

8.1.2 This paint shall not be used on wood floors. 1-GP-73 enamel is recommended for this purpose.

(OVER)

- 8.1.3 This paint is intended for repainting of trim previously painted with oil type paints. For new trim or trim previously painted with enamel, 1-GP-28 Type 2 (alkyd) paint or 1-GP-59 enamel is recommended.
- 8.1.4 Previously painted wood surfaces should be thoroughly cleaned and one or two coats applied as necessary, when there are no film defects. If blistering, cracking or flaking has occurred, wire brush or scrape areas of failure and spot prime with 1-GP-55 primer before applying the paint.
- 8.1.5 Ferrous metals should first be thoroughly cleaned and coated with 1-GP-14, 1-GP-40 or 1-GP-140 primer prior to application of this paint.
- * 8.1.6 New galvanized sheeting, or galvanized sheeting that has been exposed to weather, shall have dirt and grease thoroughly removed with solvent such as 1-GP-4 mineral spirits. It shall then be coated with 1-GP-178 zinc dust/zinc oxide primer and topcoated with 1-GP-41 paint. Other systems for coating galvanized sheeting are available. These systems, and information in respect to preparation and application, are detailed in CGSB 85-GP-16, Painting Galvanized Steel.
- 8.1.7 Where attack by fungus is a problem, consideration should be given to the use of fungicides in accordance with the manufacturer's instructions for preparation of the surface and materials to be employed.

* Change since previous amendment.



CANADIAN GOVERNMENT SPECIFICATIONS BOARD

225
175
125

SPECIFICATION

FOR

PAINT: EXTERIOR, LINSEED OIL TYPE,
SOLID COLORS

1-GP-41d

4 APRIL 1969

SUPERSEDES 1-GP-41C
30 MARCH 1962

THIS SPECIFICATION HAS BEEN PREPARED BY A GOVERNMENT -
INDUSTRY COMMITTEE TO COMPLY WITH THE SPECIFIC REQUIREMENTS
OF THE FEDERAL GOVERNMENT. IT IS INTENDED FOR USE IN A PRO-
CUREMENT SYSTEM THAT INCLUDES INSPECTION PROCEDURES TO
ENSURE COMPLIANCE WITH THE REQUIREMENTS OF THE SPECIFICA-
TION AND ITS USE WITHOUT SUCH INSPECTION PROCEDURES MAY
NOT BE ADVISABLE.

THIS SPECIFICATION APPLIES TO READY-MIXED LINSEED OIL PAINTS SUITABLE FOR
USE ON PRIMED METAL OR PREVIOUSLY PAINTED EXTERIOR SURFACES, WITH THE
EXCEPTION OF FLOORS.

DEPARTMENT OF DEFENCE PRODUCTION, OTTAWA, CANADA

COMMITTEE ON PAINTS, PIGMENTS AND RELATED COMMODITIES

and

Subcommittee on Construction and Maintenance

(Membership at date of approval by the Committee)

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Armstrong, W.N.B.	Ontario Research Foundation
Ashton, H.E.	National Research Council/DBR
Attendu, M.C.	Québec Hydro
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Barry, E.	Canadian Paint Manufacturer's Association
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Buchanan, L.B.	Department of National Defence
Cameron, J.R.	Canadian Industries Limited
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Conley, R.J.	Department of National Defence
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Giltrow, F.R.	General Paint Corporation
Girard, J.G. (Subcommittee Chairman)	Department of National Defence
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Harrington, J.M.	Department of Forestry & Rural Development
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Rubec, P.	Department of Public Works
Steel, F.L.	The Glidden Company Limited
Stubbs, K.E.	Department of Public Works
Tate, H.W.	Department of National Defence
Watt, J.S.	National Harbours Board

Standards Officer - P.B. Balon, CGSB

1-GP-41d

4 April 1969

Supersedes 1-GP-41c

30 March 1962

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Specification for

PAINT: EXTERIOR, LINSEED OIL TYPE, SOLID COLORS

1. DEFINITION

1.1 This specification applies to ready-mixed linseed oil paints suitable for use on primed metal or previously painted exterior surfaces, with the exception of floors.

1.2 For more detailed information on uses, see par. 8.1.

2. APPLICABLE PUBLICATIONS

2.1 The following publications are applicable to this specification:

2.1.1 CGSB 1-GP-12c, Standard Paint Colors.

2.1.2 CGSB 1-GP-71, Methods of Testing Paints and Pigments.

2.1.3 ASTM Standards on Paint, Varnish, Lacquer and Related Products.

2.2 Reference to the above publications, to test methods therein, and to other specifications is to the issues in effect on the date of invitation to tender, unless otherwise specified.

3. CLASSIFICATION

3.1 The paint shall be supplied in one class.

4. GENERAL REQUIREMENTS

4.1 Paint complying with this specification shall consist of suitable pigments adequately milled in a vehicle composed essentially of linseed oil modified with 10 to 20 per cent of long-oil alkyd resin, together with the necessary thinners and driers.

4.2 The paint as supplied shall be suitable for brushing, and shall be satisfactory for spraying when reduced with 1-GP-4 thinner in accordance with the manufacturer's instructions.

4.3 The paint shall have good flowing and brushing properties and shall dry to a uniform appearance without streaking, running or sagging. The dried paint may show moderate but not excessive brush marks and shall have an oil gloss appearance.

4.4 The paint shall not skin, thicken excessively, or cake in the original unopened container for one year from date of shipment when stored at temperatures not exceeding 100°F (38°C). At the end of this time, it shall be readily mixed to a uniform condition by stirring and shall meet the requirements for applicability and appearance (par. 5.18).

5. DETAIL REQUIREMENTS

Paint to this specification shall comply with the following detail requirements:

		Test Method	
		1-GP-71	ASTM
	Min	Max	
5.1 Flash Point, P.M. Closed Cup,			
	°F 95	-	3.1
	°C 35	-	-
5.2 Consistency, Krebs units	75	90	4.5
5.3 Drying Time, hr			5.1
5.3.1 Surface-Dry	-	18	-
5.3.2 Dry-for-Recoat	-	48	-
5.4 Gloss, units	60	-	13.2
5.5 Fineness of Grind, Hegman	3	-	-
5.6 Volatile Matter, % by wt	-	20	17.1
* 5.7 Water Content, % by wt	-	0.5	24.1
5.8 Phthalic Anhydride, % of NVV	2.4	5.0	57.1
5.9 Rosin and Rosin Derivatives, % of NVV	-	3	60.2
5.10 Saponification Number of Extracted NVV	190	-	-
			D555
5.11 Color -	The paint shall conform to such of the following 1-GP-12c gloss colors as may be specified by the purchaser:		
Grey	501-101, 501-102		
Blue	202-101		
Green	203-101, 203-102, 503-103, 503-104, 503-105, 503-109, 503-110		
Brown	204-101, 204-102, 204-103, 204-104, 204-105, 204-106, 504-102, 504-106		
Yellow	205-101, 205-102, 505-101		
Orange	508-101		
Red	209-101, 209-102		
Black	512-101		

* This requirement will be checked at the discretion of the testing authority.

5.12 Skinning Properties - The paint shall be nonskinning.

Method 10.1

5.13 Hiding Power - The minimum hiding power in square feet per gallon shall be as follows:

<u>1-GP-12c Color</u>			<u>1-GP-12c Color</u>		
		<u>Hiding Power</u>			<u>Hiding Power</u>
Grey	501-101	600	Brown	204-104	600
	501-102	600		204-105	600
Blue	202-101	500		204-106	600
	203-101	500		504-102	600
Green	203-102	500		504-106	400
	503-103	500	Yellow	205-101	400
	503-104	500		205-102	400
	503-105	500		505-101	400
	503-109	500	Orange	508-101	500
	503-110	500		209-101	300
Brown	204-101	600		209-202	500
	204-102	600	Black	512-101	800
	204-103	600			

Method 14.1

5.14 Pigment Composition - Orange 508-101 shall consist of pure, light-stable molybdate orange pigment and 10 per cent siliceous extender. The extracted pigment from this color of paint shall meet the following analytical requirements:

		<u>Min</u>	<u>Max</u>	<u>Test Method</u>	
				<u>1-GP-71</u>	<u>ASTM</u>
5.14.1	Total Lead, %	50	-	-	D126
5.14.2	Total Chromium, as PbCrO ₄ , %	65	-	-	D126
5.14.3	Molybdenum, as PbMoO ₄ , %	8	-	-	D126
5.14.4	HCl Insoluble Siliceous Matter, %	6	8	50.14	-

5.16 Accelerated Weathering Resistance - The dried paint film shall withstand an exposure period of fifteen 24-hour cycles in a twin-arc accelerated weathering machine, without showing evidence of blistering, chalking, checking, cracking, flaking or appreciable color change.

Method 122.6

5.17 Outdoor Exposure - When exposed three years in the Ottawa area, in an essentially vertical position, facing both south and north, the paint film shall show no cracking, checking, flaking nor peeling, and no excessive chalking nor change in color.

Method 143.8

5.18 Applicability and Appearance - A brush-out of the paint, obtained as directed in the prescribed method, shall confirm that the paint complies with the following requirements:

- 5.18.1 One coat of the paint shall exhibit complete uniform hiding. The black contrast vertical stripe marks shall not be discernible when the panel is viewed in normal daylight from a distance of 5 feet.
- 5.18.2 The paint shall have suitable consistency and good brushing properties, i.e., good flow-out with absence of ridges, sagging and excessive brush marks.
- 5.18.3 The paint shall not have an objectionable odor and shall have satisfactory recoat and drying times. There shall be no lifting, wrinkling, lack of uniformity nor other film defects.
- 5.18.4 The resultant film shall be free from coarse particles, and shall be uniform in appearance and gloss.

Method 134.2

6. PREPARATION FOR DELIVERY

6.1 Unless otherwise specified, commercial packaging, packing and marking shall be acceptable.

6.2 Labelling - In addition to labelling requirements of any relevant Acts or Regulations, each container shall be suitably labelled to show the following information:

- Manufacturer's Name and Address
- Name of Material
- CGSB Specification No.
- Qualification No. (when required)
- 1-GP-12c Color
- Manufacturer's Batch No.
- Manufacturer's Code No.
- Date of Manufacture
- Thinning Instructions for Spraying using 1-GP-4 thinner.

7. INSPECTION

7.1 Sampling - Sampling shall be carried out in accordance with Method 1.1 of CGSB 1-GP-71.

7.2 Testing - The methods of testing shall be as specified with each requirement.

7.3 Classification of Tests - Tests for determining compliance with this specification shall be classified as follows:

7.3.1 Qualification Tests - Those tests that are performed on samples submitted for qualification as a satisfactory product. They shall consist of all the tests necessary to establish compliance with all the requirements of this specification.

7.3.2 Lot Acceptance Tests - Those tests that are used to determine the acceptability of a lot or batch of a qualified product. The testing authority may request the testing of the material for compliance with any of the requirements of this specification, except Outdoor Exposure par. (5.17), and may reject a lot or batch on the basis of any requirement in the specification.

8. NOTES

8.1 Intended Uses

8.1.1 This paint is intended for general exterior use on wood that has been properly coated with 1-GP-55 primer, on previously painted wood, and on incidental metals associated with wooden structures and that have been suitably primed. This paint may also be used for topcoating structural steel.

8.1.2 Previously painted wood surfaces should be thoroughly cleaned and one or two coats applied as necessary, when there are no film defects. If blistering, cracking or flaking has occurred, wire brush or scrape areas of failure and spot prime with 1-GP-55 primer before applying the paint.

8.1.3 Paint purchased to this specification shall not be used on floors. For trim work, 1-GP-59 enamel is recommended.

8.1.4 Ferrous metals should first be coated with 1-GP-14, 1-GP-40 or 1-GP-140 primer. New galvanized sheeting should be weathered one year before painting, but if this is not possible, it is advisable to treat the sheet with 31-GP-107 metal conditioner before paint application. Weathered or treated galvanized and ferrous sheeting may be primed with 1-GP-14, 1-GP-40, 1-GP-140 or 1-GP-178 primer. Zinc dust-zinc oxide primer may be used directly on fresh galvanized sheeting before topcoating with 1-GP-41 paint.

8.1.5 Where attack by fungus is a problem, consideration should be given to the use of fungicides in accordance with the manufacturer's instructions for preparation of the surface and materials to be employed.

8.2 Ordering Data - Purchasers should specify color required; packaging, packing and marking details if commercial practice is not suitable; and if a qualified product is required.

8.3 Qualification

8.3.1 Qualification Procedure - Details regarding the procedure for qualification of 1-GP-41c Paint may be obtained from:

Chief, Testing Laboratories,
Department of Public Works,
Ottawa, Ontario.

8.3.2 Qualified Products - Federal Government departments and agencies may also obtain information from the above address regarding availability of qualified products.

8.4 Related CGSB Specifications

8.4.1 1-GP-28, Paint: Exterior, House, White and Tints.

8.4.2 1-GP-109, Paint: Lighthouse, White.

8.5 The publications referred to in par. 2.1.1 and 2.1.2 are obtainable from the CGSB.

8.6 The publication referred to in par. 2.1.2 is obtainable from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa., 19103, U.S.A.

Correspondence regarding this specification should be addressed to the Canadian Government Specifications Board, c/o Department of Supply and Services, Ottawa 4, Canada.