



Government
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Canadian General
Standards Board

Office des normes
générales du Canada

Series 1
Série des 1

WITHDRAWAL

November 2015

Selected standards in the series Paints, pigments and related products

These National Standards of Canada are hereby withdrawn due to limited use and support for their revision.

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RETRAIT

Novembre 2015

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CAN/CGSB-1.2-98

Boiled Linseed Oil (ICS 87.040)

CAN/CGSB-1.4-2000

Petroleum Spirits Thinner (ICS 87.040)

CAN/CGSB-1.70-99

High-Solvency Thinner (ICS 87.040)

CAN/CGSB-1.110-M91

General Purpose Thinner for Lacquers (ICS 87.040)

CAN/CGSB-1.124-99

Thinner for Vinyl Coatings (ICS 87.040)

CAN/CGSB-1.136-92

Antiblush Thinner for Cellulose Nitrate Lacquer (ICS 87.040)

CAN/CGSB-1.164-99

Solvent for Vinyl Pretreatment Coating (ICS 87.040)

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CAN/CGSB-1.2-98

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CAN/CGSB-1.4-2000

Diluant, essence minérale (ICS 87.040)

CAN/CGSB-1.70-99

Diluant à pouvoir solvant élevé (ICS 87.040)

CAN/CGSB-1.110-M91

Diluant d'usage général, pour produits-laque (ICS 87.040)

CAN/CGSB-1.124-99

Diluant pour revêtements aux résines vinyliques (ICS 87.040)

CAN/CGSB-1.136-92

Diluant antiopalescent pour produit-laque nitrocellulosique (ICS 87.040)

CAN/CGSB-1.164-99

Solvant pour peinture primaire réactive vinylique (ICS 87.040)



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CAN/CGSB-1.4-2000

Supersedes CAN/CGSB-1.4-92

Petroleum Spirits Thinner

National Standard of Canada

Canada



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PETROLEUM SPIRITS THINNER

Prepared by the
Canadian General Standards Board 

Approved by the
Standards Council of Canada 

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Acknowledgment is made for the translation of this National Standard of Canada by the Translation Bureau of Public Works and Government Services Canada.

CANADIAN GENERAL STANDARDS BOARD

PETROLEUM SPIRITS THINNER**1. SCOPE**

- 1.1 This standard applies to mineral or white spirits petroleum distillate that may be used as a paint and varnish thinner. It is not to be used in special applications where low-flash or high solvency thinners are required.
- 1.2 The thinner may also be used to clean brushes and spraying equipment
- 1.3 The testing and evaluation of a product against this standard may require the use of materials and/or equipment that could be hazardous. This document does not purport to address all the safety aspects associated with its use. Anyone using this standard has the responsibility to consult the appropriate authorities and to establish appropriate health and safety practices in conjunction with any applicable regulatory requirements prior to its use.

2. REFERENCED PUBLICATIONS

- 2.1 The following publications are referenced in this standard:

- 2.1.1 Canadian General Standards Board (CGSB)

- 1-GP-71 — Methods of Testing Paints and Pigments.

- 2.1.2 Health Canada

- Hazardous Products (Liquid Coating Materials Regulations) Act.

- 2.1.3 American Society for Testing and Materials (ASTM)

- D 56 — Standard Test Method for Flash Point by Tag Closed Tester

- D 86 — Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure

- D 130 — Standard Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test

- D 156 — Standard Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)

- D 235 — Standard Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)

- D 611 — Standard Test Methods for Aniline Point and Mixed Aniline Point of Petroleum Products and Hydrocarbon Solvents

- D 1093 — Standard Test Method for Acidity of Hydrocarbon Liquids and Their Distillation Residues

- D 1353 — Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products

- D 4176 — Standard Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)

- D 5623 — Standard Test Method for Sulfur Compounds in Light Petroleum Liquids by Gas Chromatography and Sulfur Selective Detection.

- 2.2 A reference to a regulation is always to the latest issue. A dated reference is to the issue specified. An undated reference is to the latest issue, unless otherwise specified by the authority applying this standard. The sources are given in the Notes section.

3. GENERAL REQUIREMENTS

- 3.1 The thinner shall be clear and free from water.

- 3.2 **Toxic Elements** — The thinner shall be manufactured in accordance with the requirements of the *Hazardous Products (Liquid Coating Materials Regulations) Act* for designated toxic elements.

4. DETAILED REQUIREMENTS

The thinner shall comply with the following detailed requirements when tested in accordance with the specified test methods:

		Min.	Max.	Test Method ¹	
				CGSB 1-GP-71	ASTM
4.1	Flash point, Tag closed cup, °C	38	—	—	D 56
4.2	Aniline point (solvent value)	60	—	—	D 611
4.3	Distillation range			—	D 86
	Initial boiling point, °C	150	165	—	—
	50% recovered, °C	165	180	—	—
	Final boiling point, °C	185	210	—	—
	Recovery, %	98.5	—	—	—
4.4	Residue on evaporation, %	—	0.1	20.1	—
4.5	Acidity reaction	—	Neutral	—	D 1093
4.6	Doctor test ²	—	Negative	—	D 235
4.7	Non-volatile matter, g/100 mL	—	0.02	—	D 1353
4.8	Sulphur, mg/kg	—	3	—	D 3120 ³
4.9	Colour, Saybolt	—	+21	—	D 156
4.10	Copper strip corrosion, 3 h at 100°C ⁴	—	No. 1	—	D 130
4.11	Appearance — The appearance of the thinner shall be clear and bright when tested as specified in ASTM D 4176.				

5. PREPARATION FOR DELIVERY

- 5.1 Unless otherwise specified (par. 7.1), preparation for delivery shall conform to normal commercial practice.
- 5.2 **Labelling** — In addition to complying with labelling requirements of any relevant Acts or Regulations, each container shall be suitably labelled to show the following information:

Name of material

Standard number: CAN/CGSB-1.4-2000

Manufacturer's name and address

Manufacturer's batch number

Manufacturer's code number

Date of manufacture

6. INSPECTION

- 6.1 **Sampling** — Sampling shall be carried out in accordance with CGSB standard 1-GP-71, Method 1.1.

¹ The test methods indicated are the approved referee methods. Other acceptable methods are footnoted.

² The test may be waived if the sulphur content of the thinner (par. 4.8) is less than 1 mg/kg.

³ Alternatively, ASTM D 5623 or an equivalent may be used.

⁴ The test may be waived if the sulphur content of the thinner (par. 4.8) is less than 1 mg/kg.

7. NOTES

7.1 **Option** — The following option must be specified in the application of this standard:

- a. Preparation for delivery if other than as specified (par. 5.1).

7.2 Recommended Practice

7.2.1 The thinner conforming to CAN/CGSB-1.5 is used when a product of higher volatility than thinner conforming to CAN/CGSB-1.4 is suitable and when no minimum flash point is stipulated.

7.2.2 The thinner conforming to CAN/CGSB-1.70 is required for general thinning of synthetic resin-base finishes requiring a higher solvent power than provided by thinner conforming to CAN/CGSB-1.4.

7.3 Related Publications

- 7.3.1 Canadian General Standards Board (CGSB)
CAN/CGSB-1.5 — Low Flash Petroleum Spirits Thinner
CAN/CGSB-1.70 — High-Solvency Thinner.

7.4 Sources of Referenced Publications

- 7.4.1 The publications referred to in par. 2.1.1 and 7.3.1 may be obtained from the Canadian General Standards Board, Sales Centre, Ottawa, Canada K1A 1G6. Telephone (819) 956-0425 or 1-800-665-CGSB (Canada only). Fax (819) 956-5644.
- 7.4.2 The publication referred to in par. 2.1.2 may be obtained from Health Canada, Product Safety Bureau, Jeanne Mance Building, 12th floor, Tunney's Pasture, Ottawa, Canada. Telephone (613) 957-4467. Fax (613) 952-3039.
- 7.4.3 The publications referred to in par. 2.1.3 may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, U.S.A., or from the Global Info Centre, 240 Catherine Street, Suite 305, Ottawa, Canada K2P 2G8. Telephone (613) 237-4250 or 1-800-854-7179.
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