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Canadian General
Standards Board Office des normes
générales du Canada

Series 1
Série des 1

WITHDRAWAL

October 2011

Selected standards in the series Paints, pigments and related products

These CGSB standards and National Standards of Canada are hereby withdrawn due to limited use and support for their revision.

The Standards Council of Canada requires that accredited Standards Development Organizations, such as the CGSB, regularly review a consensus Standard to determine whether to re-approve, revise or withdraw. The review cycle is normally five years from the publication date of the latest edition of the Standard.

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RETRAIT

Octobre 2011

Sélection de normes de la série Peintures, pigments et produits connexes

Ces normes de l'ONGC et ces Normes nationales du Canada sont retirées par le présent avis en raison de leur utilisation limitée et du manque de support pour leur révision.

Le Conseil canadien des normes exige que les organismes accrédités d'élaboration de normes, tel que l'ONGC, effectue régulièrement un examen des normes consensuelles afin de déterminer s'il y a lieu d'en renouveler l'approbation, de les réviser ou de les retirer. Le cycle d'examen d'une norme est généralement de cinq ans à partir de la date de publication de la dernière édition de celle-ci.

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to be referred to for archival purposes only as their content has been repealed as of the date on this withdrawal notice.

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CAN/CGSB-1.5-M91

Low Flash Petroleum Spirits Thinner
(ICS 87.040)

CAN/CGSB-1.28-98

Exterior Alkyd House Paint (ICS 87.040)

CAN/CGSB-1.36-97

General Purpose Interior Alkyd Varnish
(ICS 87.040)

CAN/CGSB-1.38-2000

Interior Enamel Undercoater (ICS 87.040)

CAN/CGSB-1.40-97

Anticorrosive Structural Steel Alkyd Primer
(ICS 87.040)

CAN/CGSB-1.57-2003

Interior Alkyd Semigloss Enamel
(ICS 87.040)

CAN/CGSB-1.59-97

Alkyd Exterior Gloss Enamel (ICS 87.040)

CAN/CGSB-1.60-97

Interior Alkyd Gloss Enamel (ICS 87.040)

cette information. Ces normes doivent être consultées à des fins archivistiques seulement puisque leur contenu a été révoqué à la date du présent avis de retrait.

Des copies archivées des normes retirées peuvent être obtenues à des fins historiques ou archivistiques auprès du Centre des ventes de l'ONGC. Il suffit d'en faire la demande par téléphone au 819-956-0425 ou 1-800-665-2472, par télécopieur au 819-956-5740, par Internet à : www.tpsgc-pwgsc.gc.ca/ongc-cgsb/, par courriel à ncr.CGSB-ONGC@tpsgc-pwgsc.gc.ca, ou par courrier adressé au Centre des ventes, Office des normes générales du Canada, 11, rue Laurier, Gatineau, Canada K1A 1G6.

CAN/CGSB-1.5-M91

Diluant, essence minérale à faible point d'éclair (ICS 87.040)

CAN/CGSB-1.28-98

Peinture aux résines alkydes d'extérieur pour bâtiments (ICS 87.040)

CAN/CGSB-1.36-97

Vernis d'intérieur aux résines alkydes d'usage général (ICS 87.040)

CAN/CGSB-1.38-2000

Peinture-émail d'intérieur, pour couche de fond (ICS 87.040)

CAN/CGSB-1.40-97

Peinture pour couche primaire anticorrosion, aux résines alkydes, pour acier de construction (ICS 87.040)

CAN/CGSB-1.57-2003

Peinture-émail, d'intérieur, semi-brillante, aux résines alkydes (ICS 87.040)

CAN/CGSB-1.59-97

Peinture-émail, d'extérieur, brillante, aux résines alkydes (ICS 87.040)

CAN/CGSB-1.60-97

Peinture-émail brillante d'intérieur aux résines alkydes (ICS 87.040)

CAN/CGSB-1.61-2004

Exterior and Interior Marine Alkyd Enamel
(ICS 87.040)

CAN/CGSB-1.69-98

Aluminum Paint (ICS 87.040)

1-GP-71 (Oct 1983)

Methods of Testing Paints and Pigments
(ICS 87.040)

1-GP-71

Methods of Testing Paints and Pigments

No. 5-96

Drying Times of Paints and Related
Coatings (ICS 87.040)

No. 38-96

Blushing Resistance of Lacquer
Finishes (ICS 87.040)

No. 73-96

Beilstein Test for Chlorinated Solvents
(ICS 87.040)

CAN/CGSB-1.73-97

Exterior and Interior Enamel for Floors
(ICS 87.040)

CAN/CGSB-1.74-2001

Alkyd Traffic Paint (ICS 87.040)

CAN/CGSB-1.76-2000

Interior and Exterior Heat-Resistant Enamel
(ICS 87.040)

CAN/CGSB-1.81-M90

Air Drying and Baking Alkyd Primer for
Vehicles and Equipment (ICS 87.040)

CAN/CGSB-1.84-M91

Alkyd Primer for Hardwood (ICS 87.040)

CAN/CGSB-1.61-2004

Peinture-émail aux résines alkydes,
d'extérieur et d'intérieur, marine
(ICS 87.040)

CAN/CGSB-1.69-98

Peinture à l'aluminium (ICS 87.040)

1-GP-71 (oct. 1983)

Méthodes d'essai des peintures et pigments
(ICS 87.040)

1-GP-71

Méthodes d'essai des peintures et pigments

N° 5-96

Durée de séchage des peintures et
revêtements apparentés (ICS 87.040)

N° 38-96

Résistance à l'opalescence des
produits-laque de finition (ICS 87.040)

N° 73-96

Détermination de la présence de
solvants chlorés par l'essai de Beilstein
(ICS 87.040)

CAN/CGSB-1.73-97

Peinture-émail d'extérieur et d'intérieur,
pour sols (ICS 87.040)

CAN/CGSB-1.74-2001

Peinture alkyde de démarcation routière
(ICS 87.040)

CAN/CGSB-1.76-2000

Peinture-émail résistant à la chaleur,
d'intérieur et d'extérieur (ICS 87.040)

CAN/CGSB-1.81-M90

Peinture pour couche primaire aux résines
alkydes, séchant à l'air ambiant et au four,
pour véhicules automobiles et équipement
(ICS 87.040)

CAN/CGSB-1.84-M91

Peinture d'impression aux résines alkydes,
pour bois dur (ICS 87.040)

CAN/CGSB-1.88-92

Gloss Alkyd Enamel, Air Drying and Baking
(ICS 87.040)

CAN/CGSB-1.100-99

Interior Flat Latex Paint (ICS 87.040)

CAN/CGSB-1.104-M91

Semigloss Alkyd Air Drying and Baking
Enamel (ICS 87.040)

CAN/CGSB-1.105-M91

Quick-Drying Primer (ICS 87.040)

CAN/CGSB-1.114-M91

Quick-Drying Flat Enamel (ICS 87.040)

CAN/CGSB-1.118-95

Interior Flat Alkyd Finish (ICS 87.040)

CAN/CGSB-1.119-2000

Interior Latex Primer-Sealer (ICS 87.040)

CAN/CGSB-1.122-99

Anticorrosive Vinyl Primer (ICS 87.040)

CAN/CGSB-1.132-M90

Zinc Chromate Primer, Low Moisture
Sensitivity (ICS 87.040)

CAN/CGSB-1.135-99

Flat Alkyd Enamel for Equipment
(ICS 87.040)

CAN/CGSB-1.138-97

Exterior Latex Flat Paint (ICS 87.040)

CAN/CGSB-1.143-98

Silicone Alkyd Heat-Resistant Aluminum
Enamel (ICS 87.040)

CAN/CGSB-1.88-92

Peinture-émail brillante aux résines alkydes,
séchant à l'air ambiant et au four
(ICS 87.040)

CAN/CGSB-1.100-99

Peinture-émulsion mate d'intérieur
(ICS 87.040)

CAN/CGSB-1.104-M91

Peinture-émail semi-brillante aux résines
alkydes séchant à l'air ambiant et au four
(ICS 87.040)

CAN/CGSB-1.105-M91

Peinture pour couche primaire à séchage
rapide (ICS 87.040)

CAN/CGSB-1.114-M91

Peinture-émail mate à séchage rapide
(ICS 87.040)

CAN/CGSB-1.118-95

Peinture de finition mate d'intérieur aux
résines alkydes (ICS 87.040)

CAN/CGSB-1.119-2000

Peinture-émulsion d'impression d'intérieur
(ICS 87.040)

CAN/CGSB-1.122-99

Peinture pour couche primaire, aux résines
vinyliques, anticorrosion (ICS 87.040)

CAN/CGSB-1.132-M90

Peinture pour couche primaire, au chromate
de zinc, à faible sensibilité à l'humidité
(ICS 87.040)

CAN/CGSB-1.135-99

Peinture-émail mate aux résines alkydes
pour équipement (ICS 87.040)

CAN/CGSB-1.138-97

Peinture-émulsion (latex) mate, d'extérieur
(ICS 87.040)

CAN/CGSB-1.143-98

Peinture-émail aux résines silicones-
alkydes résistante à la chaleur (ICS 87.040)

CAN/CGSB-1.145-97

Solvent-Based Pigmented Stain
(ICS 87.040)

CAN/CGSB-1.146-99

Cold Curing, Gloss Epoxy Coating
(ICS 87.040)

CAN/CGSB-1.150-M91

Clear Lacquer for Wood Furniture
(ICS 87.040)

CAN/CGSB-1.153-2000

High-Build, Gloss Epoxy Coating
(ICS 87.040)

CAN/CGSB-1.154-M89

Latex Type Paint for Concrete Floors
(ICS 87.040)

CAN/CGSB-1.158-M89

Cellulose Nitrate Primer, Modified Alkyd
Type (ICS 87.040)

CAN/CGSB-1.159-92

Acrylic Cellulose Nitrate Gloss Lacquer
(ICS 87.040)

CAN/CGSB-1.160-93

Low Gloss Acrylic Cellulose Nitrate
Lacquer (ICS 87.040)

CAN/CGSB-1.162-2004

Emulsion Coating for Stucco and Masonry
(ICS 87.040)

CAN/CGSB-1.165-2004

Cold-Curing Epoxy Primer (ICS 87.040)

CAN/CGSB-1.171-98

Inorganic Zinc Coating (ICS 87.040)

CAN/CGSB-1.175-97

Polyurethane Interior Coating (ICS 87.040)

CAN/CGSB-1.145-97

Teinture pigmentée à base de solvant
(ICS 87.040)

CAN/CGSB-1.146-99

Revêtement aux résines époxydiques,
durcissant à froid, brillant (ICS 87.040)

CAN/CGSB-1.150-M91

Vernis-laque pour meubles en bois
(ICS 87.040)

CAN/CGSB-1.153-2000

Revêtement par peinture aux résines
époxydiques, à pouvoir garnissant élevé,
brillant (ICS 87.040)

CAN/CGSB-1.154-M89

Peinture-émulsion (latex) pour sols en béton
(ICS 87.040)

CAN/CGSB-1.158-M89

Peinture-laque pour couche primaire, au
nitrate de cellulose et aux résines alkydes
modifiées (ICS 87.040)

CAN/CGSB-1.159-92

Produit-laque brillant à la résine acrylique et
au nitrate de cellulose (ICS 87.040)

CAN/CGSB-1.160-93

Peinture-laque aux résines acryliques et au
nitrate de cellulose, peu brillante
(ICS 87.040)

CAN/CGSB-1.162-2004

Revêtement de type émulsion pour stuc et
maçonnerie (ICS 87.040)

CAN/CGSB-1.165-2004

Peinture pour couche primaire aux résines
époxydiques, durcissant à froid
(ICS 87.040)

CAN/CGSB-1.171-98

Enduit au zinc minéral (ICS 87.040)

CAN/CGSB-1.175-97

Revêtement de polyuréthane d'intérieur
(ICS 87.040)

CAN/CGSB-1.176-2000

Interior Clear Moisture-Curing Polyurethane Coating (ICS 87.040)

CAN/CGSB-1.177-M91

Two-Component Polyurethane Coating, Resistant to Chalking and Yellowing (ICS 87.040)

1-GP-180Ma (Feb 1996)

Coating, Polyurethane, Two-Package, General Purpose (ICS 87.040)

CAN/CGSB-1.181-99

Ready-Mixed Organic Zinc-Rich Coating (ICS 87.040)

CAN/CGSB-1.183-99

Zinc-Rich Epoxy Coating (ICS 87.040)

CAN/CGSB-1.184-98

Coal Tar-Epoxy Coating (ICS 87.040)

CAN/CGSB-1.188-2004

Emulsion Filler for Masonry Block (ICS 87.040)

CAN/CGSB-1.189-2000

Exterior Alkyd Primer for Wood (ICS 87.040)

CAN/CGSB-1.190-M90

Sanding Type Primer Surfacer (ICS 87.040)

1-GP-191M (Apr 1980)

Enamel, Automotive Refinishing, Fast Drying, Gloss (ICS 87.040)

1-GP-192Ma (Feb 1985)

Deck Coating, Nonslip, Epoxy (ICS 87.040)

CAN/CGSB-1.176-2000

Revêtement de polyuréthane, d'intérieur, durci à l'humidité, non pigmenté (ICS 87.040)

CAN/CGSB-1.177-M91

Revêtement de polyuréthane, à deux constituants séparés, non jaunissant et non farinant (ICS 87.040)

1-GP-180Ma (févr. 1996)

Revêtement de polyuréthane, à deux constituants séparés, pour utilisation générale (ICS 87.040)

CAN/CGSB-1.181-99

Enduit riche en zinc, organique et préparé (ICS 87.040)

CAN/CGSB-1.183-99

Enduit aux résines époxydiques, riche en zinc (ICS 87.040)

CAN/CGSB-1.184-98

Revêtement à base de goudron de houille-résines époxydiques (ICS 87.040)

CAN/CGSB-1.188-2004

Apprêt-émulsion pour blocs de maçonnerie (ICS 87.040)

CAN/CGSB-1.189-2000

Peinture d'impression, d'extérieur, aux résines alkydes, pour le bois (ICS 87.040)

CAN/CGSB-1.190-M90

Peinture pour couche primaire surfaçante de type ponçable (ICS 87.040)

1-GP-191M (avr. 1980)

Peinture-émail brillante, à séchage rapide, pour le repeinturage des carrosseries de véhicules automobiles (ICS 87.040)

1-GP-192Ma (févr. 1985)

Revêtement de pont, antidérapant, aux résines époxydiques (ICS 87.040)

CAN/CGSB-1.193-99

High-Build Epoxy Marine Coating
(ICS 87.040)

CAN/CGSB-1.195-99

Interior Latex Semigloss Paint (ICS 87.040)

CAN/CGSB-1.198-2001

Cementitious Primer for Galvanized
Surfaces (ICS 87.040)

1-GP-200Ma (Jan 1985)

Deck Coating, Nonslip, Polyurethane
(ICS 87.040)

CAN/CGSB-1.202-2003

Interior Alkyd Low Gloss Enamel
(ICS 87.040)

CAN/CGSB-1.203-2003

Exterior Latex Wood Primer (ICS 87.040)

CAN/CGSB-1.204-98

Exterior Latex Pigmented Stain
(ICS 87.040)

CAN/CGSB-1.205-2003

Sealer for Application to Asbestos-Fibre
Releasing Materials (ICS 87.040)

CAN/CGSB-1.207-98

Low-Temperature Curing Epoxy Coating
(ICS 87.040)

CAN/CGSB-1.208-99

Marine Interior Water-Borne Gloss Enamel
(ICS 87.040)

CAN/CGSB-1.209-2003

Interior Latex Low Gloss Paint (ICS 87.040)

CAN/CGSB-1.210-2003

Quick-Drying Alkyd Primer for Structural
Steel (ICS 87.040)

CAN/CGSB-1.193-99

Revêtement aux résines époxydiques, à
pouvoir garnissant élevé, marin
(ICS 87.040)

CAN/CGSB-1.195-99

Peinture-émulsion semi-brillante d'intérieur
(ICS 87.040)

CAN/CGSB-1.198-2001

Peinture primaire additionnée de ciment,
pour surfaces galvanisées (ICS 87.040)

1-GP-200Ma (janv. 1985)

Revêtement de pont, antidérapant, aux
résines polyuréthanes (ICS 87.040)

CAN/CGSB-1.202-2003

Peinture-émail d'intérieur, aux résines
alkydes, peu brillante (ICS 87.040)

CAN/CGSB-1.203-2003

Peinture-émulsion (latex) d'impression
extérieure, pour bois (ICS 87.040)

CAN/CGSB-1.204-98

Teinture-émulsion pigmentée pour extérieur
(ICS 87.040)

CAN/CGSB-1.205-2003

Peinture d'obturation pour matériaux
renfermant des fibres d'amiant
(ICS 87.040)

CAN/CGSB-1.207-98

Revêtement aux résines époxydiques
durcissant à basse température
(ICS 87.040)

CAN/CGSB-1.208-99

Peinture-émail brillante en suspension
aqueuse, marine, d'intérieur (ICS 87.040)

CAN/CGSB-1.209-2003

Peinture-émulsion d'intérieur peu brillante
(ICS 87.040)

CAN/CGSB-1.210-2003

Peinture primaire aux résines alkydes à
séchage rapide pour acier de charpente
(ICS 87.040)

CAN/CGSB-1.211-95

Coating Systems for Marine Floating Navigational Aids (Buoys) (ICS 87.040)

CAN/CGSB-1.212-2004

Heavy-Metal-Free Marine Primer for Steel and Light-Alloy Surfaces (ICS 87.040)

CAN/CGSB-1.213-2004

Etch Primer (Pretreatment Coating or Tie Coat) for Steel and Aluminum (ICS 87.040)

CAN/CGSB-1.214-2004

Heavy-Metal-Free, Water-Borne, Marine Primer for Steel and Light-Alloy Surfaces (ICS 87.040)

CAN/CGSB-1.215-96

Two-Package Epoxy Blockfiller (ICS 87.040)

CAN/CGSB-1.216-97

Exterior Water-Borne Gloss Enamel (ICS 87.040)

CAN/CGSB-1.219-2001

Lead and Chromate-Free Waterborne Traffic Paint (ICS 87.040)

CAN/CGSB-1.220-2001

Lead and Chromate-Free Alkyd Traffic Paint (ICS 87.040)

CAN/CGSB-1.223-2004

Heavy-Metal-Free, Water-Borne Wash Primer-Tie Coat (ICS 87.040)

CAN/CGSB-1.300-2000

Applied Coating System of Semigloss Baked Finish for Metal Office Furniture (ICS 87.040)

CAN/CGSB-1.500-75

Methods for Test for Toxic Trace Elements in Protective Coatings (ICS 87.040)

CAN/CGSB-1.211-95

Systèmes de revêtement pour aides à la navigation flottantes (bouées) (ICS 87.040)

CAN/CGSB-1.212-2004

Peinture primaire sans métal lourd, marine, pour surfaces en acier et en alliage léger (ICS 87.040)

CAN/CGSB-1.213-2004

Peinture primaire réactive (enduit de traitement préliminaire ou couche de liaison) pour l'acier et l'aluminium (ICS 87.040)

CAN/CGSB-1.214-2004

Peinture primaire, sans métal lourd, en suspension aqueuse, marine, pour surfaces en acier et en alliage léger (ICS 87.040)

CAN/CGSB-1.215-96

Apprêt pour blocs aux résines époxydiques en deux constituants (ICS 87.040)

CAN/CGSB-1.216-97

Peinture-émail brillante d'extérieur en suspension aqueuse (ICS 87.040)

CAN/CGSB-1.219-2001

Peinture à l'eau de démarcation routière sans plomb ni chromate (ICS 87.040)

CAN/CGSB-1.220-2001

Peinture alkyde de démarcation routière sans plomb ni chromate (ICS 87.040)

CAN/CGSB-1.223-2004

Peinture primaire réactive – Couche de liaison, sans métal lourd, en suspension aqueuse (ICS 87.040)

CAN/CGSB-1.300-2000

Système de revêtement de finition semi-brillant, cuit au four, pour meubles métalliques de bureau (ICS 87.040)

CAN/CGSB-1.500-75

Méthodes d'essai des éléments toxiques à l'état de trace dans les revêtements protecteurs (ICS 87.040)

CAN/CGSB-1.501-M89

Method for Permeance of Coated
Wallboard (ICS 87.040)

CAN/CGSB-1.501-M89

Méthode de détermination de la perméance
des panneaux muraux revêtus (ICS 87.040)

NATIONAL STANDARD OF CANADA

CAN/CGSB-1.159-92

Supersedes 1-GP-159M

Acrylic Cellulose Nitrate Gloss Lacquer



QUALITY

Withdrawn/Retired

Canadian General Standards Board

CGSB

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CGSB standards are subject to review and revision at any time, so as to ensure that they keep abreast of technological progress. Suggestions for their improvement, which are always welcome, should be brought to the notice of the standards committees concerned. Changes to standards are issued either as separate amendment sheets or in new editions of standards.

An up-to-date listing of CGSB standards, including details on latest issues and amendments, and ordering instructions, will be found in the CGSB Catalogue, which is published annually and is available without charge upon request.

Although the intended primary application of this standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

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The principal objectives of the Council are to foster and promote voluntary standardization as a means of advancing the national economy, benefiting the health, safety and welfare of the public, assisting and protecting the consumer, facilitating domestic and international trade, and furthering international co-operation in the field of standards.

A National Standard of Canada is a standard which has been approved by the Standards Council of Canada and one which reflects a reasonable agreement among the views of a number of capable individuals whose collective interests provide, to the greatest practicable extent, a balance of representation of producers, users, consumers and others with relevant interests, as may be appropriate to the subject in hand. It normally is a standard that is capable of making a significant and timely contribution to the national interest.

Approval of a standard as a National Standard of Canada indicates that a standard conforms to the criteria and procedures established by the Standards Council of Canada. Approval does not refer to the technical content of the standard; this remains the continuing responsibility of the accredited standards-writing organization.

Those who have a need to apply standards are encouraged to use National Standards of Canada whenever practicable. These standards are subject to periodic review; therefore, users are cautioned to obtain the latest edition from the organization preparing the standard.

The responsibility for approving National Standards of Canada rests with the:

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ACRYLIC CELLULOSE NITRATE GLOSS LACQUER

This new edition supersedes CGSB standard 1-GP-159M, January 1980. There are no substantial technical changes.

The Department of National Defence administers a Qualification Listing Program for products conforming to the requirements of this standard. Further information on the listing program is available from the Director of Engineering and Maintenance Planning and Standardization (DEMPS 4), Ottawa, Canada K1A 0K2.

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CANADIAN GENERAL STANDARDS BOARD

ACRYLIC CELLULOSE NITRATE GLOSS LACQUER

1. SCOPE

- 1.1 This standard applies to a general purpose exterior coating of acrylic cellulose nitrate gloss lacquer for protecting metal surfaces, particularly those of aircraft where resistance to diester lubricating oil is required.
- 1.2 For more detailed information on intended uses, see par. 8.2.
- 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 existing applicable regulatory requirements prior to its use.

2. APPLICABLE PUBLICATIONS

- 2.1 The following publications are applicable to this standard:
- 2.1.1 Canadian General Standards Board (CGSB)
- 1-GP-12 — Standard Paint Colors
 - CAN/CGSB-1.22 — Aluminum Pigment Powder for Paint
 - CAN/CGSB-1.24 — Aluminum Pigment Paste for Paint
 - 1-GP-71 — Methods of Testing Paints and Pigments
 - CAN/CGSB-1.158 — Cellulose Nitrate, Primer, Modified Alkyd Type
 - 1-GP-197 — Thinner for Epoxy Coatings
 - 3.856 — Fluid, Deicing-Defrosting, Aircraft Surfaces
 - CAN/CGSB-8.1 — Sieves, Testing, Woven Wire.
- 2.1.2 ASTM
- D 185 — Test Methods for Coarse Particles in Pigments, Pastes and Paints
 - D 1210 — Test Method for Fineness of Dispersion of Pigment-Vehicle Systems.
- 2.2 Reference to the above publications and other related standards is to the latest issues unless otherwise specified by the authority applying this standard. The sources of these publications are shown in the Notes section.

3. CLASSIFICATION

- 3.1 Gloss lacquer shall be supplied in one of the following types, as specified (par. 8.1):
- 3.1.1 *Types*
- Type 1 — Clear
 - Type 2 — Pigmented.

4. GENERAL REQUIREMENTS

- 4.1 Type 1 lacquer shall consist of cellulose nitrate, copolymer of methyl methacrylate and other acrylic esters, and plasticizer adequately dissolved in suitable solvents. The lacquer vehicle shall be compounded free from particles of undissolved ingredients and sediments.
- 4.2 Type 2 lacquer shall consist of the same vehicle as Type 1 but with the addition of thoroughly dispersed, durable, lightfast pigments.
- 4.3 For both Type 1 and Type 2 lacquer, the composition of the acrylic resin, cellulose nitrate and plasticizers shall be as follows:
- 4.3.1 The acrylic resin shall be a copolymer of methyl methacrylate and other acrylic esters, with the former being the major component in the copolymer. The viscosity at 40% solids in toluene shall be 480 to 680 centipoises at 30°C (Note 1).
- 4.3.2 The cellulose nitrate shall be 1/2 second grade and the nitration on a dry mass basis shall be between 11.8 and 12.2%.
- 4.3.3 The plasticizer shall consist of di-isooctyl phthalate or dioctyl phthalate.
- 4.4 The lacquer shall be suitable for spray application when reduced with a thinner (CGSB 1-GP-197) in accordance with the manufacturer's instructions.
- 4.5 The lacquer shall be homogeneous and free from lumps and grit. The sprayed film shall have good flowout properties and shall dry to a uniform appearance without streaking, running, sagging, orange-peeling or exhibiting other defects. After 48 h the dried film shall have no objectionable odour.
- 4.6 The lacquer shall show no hard settling, thickening, curdling, or undue loss in viscosity in the original unopened container when stored at temperatures not exceeding 40°C for two years from date of shipment. At the end of this time the lacquer shall be capable of being readily mixed to a uniform condition by simple stirring and shall meet the requirements for drying time (par. 5.1).

5. DETAILED REQUIREMENTS

Lacquer to this standard shall comply with the following detailed requirements when tested in accordance with the specified test methods:

		Min.	Max.	Test Method	
				CGSB 1-GP-71	ASTM
5.1	Drying time, dry hard, minutes	—	40	5.1	—
5.2	60° gloss, units			13.1	—
	Blue 502-101	80	—		
	Black 512-101	80	—		
	White 513-101	70	—		
	All other colours	75	—		
5.3	Fineness of grind, Hegman, Type 2	7	—	—	D 1210
5.4	Coarse particles retained on 45 µm (No. 325) sieve (Note 2), % by mass	—	0.1	—	D 185
5.5	Nonvolatile matter, % by mass			18.3	—
	Type 1	30	—		
	Type 2	40	—		
	Except Blue 502-101, 502-103, Red 509-102 and 502-101	32	—		

Note 1: A formulation guide for the manufacture of lacquer to this standard is given in Appendix A.

Note 2: CAN/CGSB-8.1.

- 5.6 **Colour** — Type 2 lacquer shall conform to the gloss colours (CGSB 1-GP-12) and numbers listed in par. 5.7 and other colours as may be specified (par. 8.1).
- 5.7 **Hiding Power** — When applied at a maximum dry film thickness of 25 µm (CGSB 1-GP-71, Method 128.1) to black and to white polished glass in accordance with the specified method, the pigmented lacquer shall meet the following contrast ratio requirements when tested in accordance with CGSB standard 1-GP-71, Method 14.7.

	Colour Number (Note 3)	Contrast Ratio
Grey	501-101	0.99
	501-102	0.99
	501-103	0.99
	501-106	0.99
	501-109	0.99
Blue	202-101	0.98
	502-101	0.98
	502-103	0.98
Green	503-104	0.99
	503-108	0.99
	503-111	0.98
Brown	504-103	0.99
Yellow	505-101	0.88
Orange	508-101	0.96
Red	509-102	0.88
Black	512-101	1.00
White	513-101	0.90

- 5.8 **Gasoline Resistance** — The lacquer film applied over primer conforming to CAN/CGSB-1.158 shall withstand 4 h immersion in a 70:30 mixture of iso-octane:toluene without blistering, lifting, or exhibiting other signs of film failure. Slight gumming above the liquid level shall not be cause for rejection. After 24 h recovery, the film shall show no softening and only slight discolouration or loss in 60° gloss of not more than 5 units. The test fluid shall not be coloured by extraction of material from the film and the recovered film shall show no flaking when bent over a 12.7 mm mandrel and when tested in accordance with CGSB standard 1-GP-71, Method 107.5.
- 5.9 **Resistance to Anti-Icing Fluid** — The lacquer film applied over primer conforming to CAN/CGSB-1.158 shall withstand 4 h immersion in deicing-defrosting fluid conforming to CGSB specification 3.856, at 23°C without blistering, lifting or displaying other evidence of film failure. Slight gumming above the liquid level shall not be cause for rejection. The test fluid shall not be coloured by extraction of matter from the film when tested in accordance with CGSB standard 1-GP-71, Method 108.3.
- 5.10 **Lubricating Oil Resistance** — The lacquer film applied over primer conforming to CAN/CGSB-1.158 shall withstand 2 h immersion in synthetic oil (95% dioctylsebacate and 5% tricresyl phosphate) at 120°C without blistering, film softening or showing other signs of film failure. Slight gumming above the liquid level shall not be cause for rejection. Slight discolouration of the film shall be permitted. The oil shall not be coloured by extraction of matter from the film. After 24 h recovery time, the film under test shall be equal in hardness, toughness and anchorage to the film on an unexposed panel when tested in accordance with CGSB standard 1-GP-71, Method 109.2.

Note 3: Aluminum-coloured lacquer may be obtained by mixing 1 L clear lacquer with 63 g Class A aluminum powder (CAN/CGSB-1.22) or 94 g Class A aluminum pigment paste (CAN/CGSB-1.24). For other colours specify contrast ratio and nonvolatile content (par. 8.1).

- 5.11 **Water Resistance** — The lacquer film applied over primer conforming to CAN/CGSB-1.158 shall withstand immersion in water for 24 h at 23°C without showing any cracking, blistering or whitening. A slight whitening or dulling that is removable by light wiping with a soft cloth shall not be cause for rejection. The water shall not be coloured by extraction of matter from the film. The lacquer film subjected to the tape test shall show no separation of the lacquer from the primer or of primer from the metal when tested in accordance with CGSB standard 1-GP-71, Method 110.10.
- 5.12 **Baking Resistance** — Lacquer film, when applied over primer conforming to CAN/CGSB-1.158 and baked 48 h at $60 \pm 2^\circ\text{C}$, shall show no considerable colour change in comparison with the unbaked film when tested in accordance with CGSB standard 1-GP-71, Method 112.3.
- 5.13 **Low-Temperature Flexibility** — The lacquer film when applied over primer conforming to CAN/CGSB-1.158 shall exhibit no flaking at the bend when subjected to the bending test at 0°C using a 6.4 mm mandrel in accordance with CGSB standard 1-GP-71, Method 119.15. Fine cracks shall not be cause for rejection.
- 5.14 **Behaviour Towards Undercoats and Self-Lifting**
- 5.14.1 A single coat of the lacquer applied over primer conforming to CAN/CGSB-1.158 shall not cause lifting nor appreciable softening of the primer.
- 5.14.2 A second coat of the lacquer, applied at intervals of 1/2, 1, and 2 h after the application of the first coat of lacquer, shall not cause lifting nor wrinkling of either the primer or the first coat of lacquer.
- 5.14.3 The difference in gloss of the second coat of lacquer on the panels described in the preceding paragraph shall not be greater than 5 units, when compared with the gloss of one coat of lacquer applied over an unprimed metal test panel when tested in accordance with CGSB standard 1-GP-71, Method 133.1 and par. 7.2.1.
- 5.15 **Adhesion** — Panels coated with primer conforming to CAN/CGSB-1.158, topcoated with the lacquer and subjected to the knife test, shall produce a ribbon of film free from crumbling or evidence of intercoat separation. There shall be no flaking, loosening or separation of coats in the area adjacent to the scratch when tested in accordance with CGSB standard 1-GP-71, Method 135.6.
- 5.16 **Print Resistance** — Lacquer film, applied over primer conforming to CAN/CGSB-1.158, dried 16 h and then subjected to the print test, at a pressure of 7 kPa for 1 h, shall show no imprint 4 h after removal of the fabric when tested in accordance with CGSB standard 1-GP-71, Method 142.1.
- 5.17 **Accelerated Weathering Resistance** — Two coats of lacquer, applied over primer conforming to CAN/CGSB-1.158, shall withstand an exposure period of twenty 24 h cycles in an accelerated weathering machine without showing evidence of blistering, chalking, checking, cracking, flaking, peeling or moderate colour change. The final gloss shall not be less than 55. The change in 45° reflectance of the international orange colour 508-101 after 7 cycles shall not exceed 3% when tested in accordance with CGSB standard 1-GP-71, Method 122.10.

6. PREPARATION FOR DELIVERY

- 6.1 Unless otherwise specified (par. 7.1) preparation for delivery shall conform to normal commercial practice.
- 6.2 **Labelling** — In addition to complying with the 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-1.159-92

Type

Colour and number conforming to CGSB standard 1-GP-12

Manufacturer's name and address

Manufacturer's batch number

Manufacturer's code number

Date of manufacture

Thinning instructions for spraying using thinner conforming to CGSB standard 1-GP-197.

7. INSPECTION

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

7.2 Testing

7.2.1 **Behaviour Toward Undercoats and Self-Lifting — Preparation of Comparison Panel** — Apply one coat of the lacquer under test to a 75 × 150 mm anodized aluminum panel (CGSB 1-GP-71, Method 99.2) to provide a dry film thickness of $15 \pm 3 \mu\text{m}$ and allow to dry 48 h. Measure the 60° gloss (Method 13.1) of the coated panel and of the test panels prepared in compliance with par. 5.15 and CGSB standard 1-GP-71, Method 133.1. Calculate the difference in gloss between the comparison panel and the test panels.

7.2.2 The procedures for rating the effects of change given in CGSB standard 1-GP-71, Method 143.1 shall be used, as applicable, for evaluating performance.

8. NOTES

8.1 **Options** — The following options must be specified in the application of this standard:

- a. Type (par. 3.1)
- b. Colour required for Type 2 (par. 5.6)
- c. Contrast ratio and nonvolatile content, if colours other than listed are required (par. 5.7)
- d. Preparation for delivery, if other than as specified (par. 6.1).

8.2 Intended Uses

8.2.1 Designed primarily for spray application, the lacquer is intended for use over primer conforming to CAN/CGSB-1.158 and should not be applied directly over vinyl pretreatment coating described in CGSB standard 1-GP-121.

8.2.2 A description of the uses of coatings and related materials covered by CGSB standards is available in CGSB standard 1-GP-72, Guide to the Selection of Paint Standards on Use Basis.

8.3 Related Publications

Coating Systems

8.3.1 CGSB

1-GP-121 — Coating, Vinyl, Pretreatment, for Metals (Vinyl Wash Primer)

CAN/CGSB-1.158 — Cellulose Nitrate Primer, Modified Alkyd Type.

8.3.2 ASTM

D 1732 — Practices for Preparation of Magnesium Alloy Surfaces for Painting.

End Uses

8.3.3 CAN/CGSB-1.134 — Cellulose Nitrate, Gloss Lacquer for Aircraft.

8.3.4 U.S. Military Specification

MIL-L-19537C — Lacquer; Acrylic-Nitrocellulose, Gloss (for Aircraft Use).

8.4 Sources of Referenced Publications

- 8.4.1 The publications referred to in par. 2.1.1, 8.2.3, 8.3.1 and 8.3.3 may be obtained from the Canadian General Standards Board, Sales Centre, Ottawa, Canada K1A 1G6. Telephone (613) 941-8703 or 941-8704. Fax (613) 941-8705.
- 8.4.2 The publications referred to in par. 2.1.2 and 8.3.2 may be obtained from ASTM, 1916 Race Street, Philadelphia, PA 19103, U.S.A. or from the Standards Council of Canada, Standards Sales Branch, 45 O'Connor Street, Suite 1200, Ottawa, Ontario K1P 6N7.
- 8.4.3 The publication referred to in par. 8.3.4 may be obtained from the Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120, U.S.A.

Withdrawn/Retirée

COMPOSITION OF ACRYLIC CELLULOSE NITRATE GLOSS LACQUER

- A1.** The following formulation (per cent by mass) is intended to serve as a guide only in the manufacture of CGSB standard 1-GP-159 lacquers:

MATERIAL	MINIMUM	MAXIMUM
Pigmented colours (Note 1)		
Nonvolatile	40	—
Volatile	—	60
Clear		
Nonvolatile	30	—
Volatile	—	70
Volatile portion (Note 2)		
Total ketones	55	—
Medium boiling (Note 3)	27.5	—
Total alcohol	—	6
Toluene (Note 4)	—	41
Nonvolatile vehicle solids		
RS-1/2 s cellulose nitrate (par. 4.3.2)	23	26
Resins (par. 4.3.1)	54	57
Plasticizers (par. 4.3.3)	19	21

Note 1: For blue 502-103 and 502-101, Red 509-102 and black 512-101, nonvolatile 32% minimum, volatile 68% maximum.

Note 2: Minimum boiling point of the volatile portion shall not be less than 75°C.

Note 3: Boiling above 114°C.

Note 4: Aliphatic hydrocarbons should not be used.



Withdrawn/Retirée