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These CGSB standards and National Standards of Canada are hereby withdrawn due to limited use and support for their revision.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

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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.

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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'amiante
(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)



Canadian
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CAN/CGSB-1.146-99

Supersedes CAN/CGSB-1.146-92

Cold Curing, Gloss Epoxy Coating

National Standard of Canada

Canada



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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.

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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-development 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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COLD CURING, GLOSS EPOXY COATING

Prepared by the

Canadian General Standards Board



Approved by the

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COLD CURING, GLOSS EPOXY COATING**1. SCOPE**

- 1.1 This standard applies to a pigmented cold-curing, two-component gloss epoxy coating for use on properly prepared unpainted surfaces, such as concrete, concrete blocks, brick and wood, and on primed metal.
- 1.2 The coating is intended for use on surfaces where good impact, superior washability and good durability are required, for industrial applications where superior chemical resistance is required, and for use in marine atmospheres. Although the coating is suitable for exterior use, some chalking and yellowing will occur upon weathering.
- 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
CAN/CGSB-1.165 — Cold Curing Epoxy Primer.
- 2.1.2 Health Canada
Hazardous Products (Liquid Coating Materials Regulations) Act.
- 2.1.3 American Society for Testing and Materials (ASTM)
D 1210 — Standard Test Method for Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage.
- 2.1.4 U.S. General Services Administration
Federal Standard
595B — Colors Used in Government Procurement.
- 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 coating shall be supplied as a two-component system consisting of a resin and a curing agent. The pigment shall be adequately dispersed in the resin component.
- 3.2 When the two components are adequately mixed together and allowed to stand for the induction period recommended by the manufacturer, the mixture shall be primarily suitable for spraying when thinned and applied in accordance with the manufacturer's instructions. This mixture shall produce a smooth, uniform finish.
- 3.3 The two components when stored in their respective original unopened containers for one year from the date of shipment at temperatures between 5 and 40°C shall be readily mixed to a uniform condition by stirring.

- 3.4 When specified for architectural purposes (par. 7.1), the colour of the coating shall conform to a Federal standard 595B colour and number or to an adequately defined commercial colour. When colour stability in the presence of acids and alkalis is required in addition to chemical resistance, the following colours apply: Blue 15182, Green 34350, Brown 20152, Yellow 13591, Orange 11400 (International Orange), Red 11350.
- 3.5 The coating shall be manufactured in accordance with the requirements of the *Hazardous Products (Liquid Coating Materials Regulations) Act* for designated toxic elements.

4. DETAILED REQUIREMENTS

When mixed in accordance with the manufacturer's instructions and tested or applied for testing between 2 and 4 after mixing, the two components (without reduction) shall produce a coating complying with the following requirements when tested in accordance with the specified test methods:

		Test Method			
		Min.	Max.	CGSB 1-GP-71	ASTM Other
4.1	Consistency, initial (15 min after mixing), Krebs units	60	80	—	— Par. 6.2.3
4.2	Pot life consistency, 4 h after mixing, Krebs units	—	95	—	— Par. 6.2.3
4.3	Drying time				
	Dry hard, h	—	18	5, Method A	— —
	Complete cure, d	—	—	7	— Par. 6.2.4
4.4	Fineness of grind, Hegman units	6	—	—	D 1210 —
4.5	60° gloss, units	80	—	13.2	— —
4.6	Volatile matter, % by mass	—	35	17.1 ¹	— —
4.7	Impact Resistance — When subjected to 10 J (89 ft. lbs.) on both the coated and uncoated sides, the cured film in the impact area shall show no cracking or flaking when tested in accordance with CGSB standard 1-GP-71, Method 147.1.				
4.8	Hiding Power — When the coating is applied by drawdown blade, the black-and-white or black-and-grey squares of the hiding power chart shall not be visible under the dried film prepared with a 150 ± 15 µm wet film thickness for Yellow 13538 and 13591, Orange 12243, Red 11086 and 11310, and a 125 ± 15 µm wet film thickness for all other colours when tested in accordance with CGSB standard 1-GP-71, Method 14.1.				
4.9	Acid Resistance — The cured film shall withstand the action of 5% sulphuric acid for 72 h without softening, blistering, wrinkling or loss of adhesion, except dulling should be disregarded, when tested in accordance with CGSB standard 1-GP-71, Method 105.2. In addition no colour change shall be permitted for the acid and alkali-resistant colours listed in par. 3.4.				
4.10	Alkali Resistance — The cured film shall withstand the action of 20% sodium hydroxide for 72 h without softening, blistering, wrinkling or loss of adhesion when tested in accordance with CGSB standard 1-GP-71, Method 106.1. In addition only a slight colour change shall be permitted for the acid- and alkali-resistant colours listed in par. 3.4.				
4.11	Gasoline Resistance — The coating, when applied over epoxy primer and immersed 6 h in a 70:30 mixture of iso-octane/toluene, shall show no wrinkling, blistering or loss of adhesion when tested in accordance with par. 6.2.5. After subsequent drying for 2 h, the cured film shall show no softening and only a trace of discolouration.				

¹ The volatile matter is determined on each component separately or on the mixed material. When performed on the individual components, the volatile matter of the material ready for use is calculated for the mixture obtained when the components are combined in the proportions recommended by the manufacturer.

- 4.12 **Flexibility** — The cured film shall show no cracking or peeling when subjected to the bending test using a 3.2 mm mandrel in accordance with CGSB standard 1-GP-71, Method 119.5.
- 4.13 **Scrubbability** — The cured film shall withstand 5000 cycles in the washability machine without showing more than a slight difference in appearance between the scrubbed and unscrubbed portions when tested in accordance with CGSB standard 1-GP-71, Method 125.1.
- 4.14 **Slick Resistance** — The cured film shall not develop slick when cured at 80% RH in accordance with CGSB standard 1-GP-71, Method 148.1.
- 4.15 **Applicability and Appearance** — When applied by spray, the film shall dry to a smooth, glossy, uniform finish, free from lifting, sags, runs and pinholes. In addition, the film shall have good levelling properties, a satisfactory recoat time and good hiding properties when tested in accordance with par. 6.2.6.

5. PREPARATION FOR DELIVERY

- 5.1 Unless otherwise specified (par. 7.1), preparation for delivery shall conform to normal commercial practice and the requirements of par. 5.3.

- 5.2 **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-1.146-99

Date of manufacture

Colour and number of Federal Standard 595B

Manufacturer's name and address

Manufacturer's batch number

Manufacturer's code number

Instructions for use:

Mixing: According to manufacturer's instructions.

Induction period: According to manufacturer's instructions.

Thinning: According to manufacturer's instructions.

Application conditions: Temperature and humidity conditions to be specified by manufacturer (par. 7.3.2).

Cautionary notes:

- Contact with the skin should be avoided.
- The material should be used under adequately ventilated conditions.
- The material should be kept between 5 and 40°C.
- The material is flammable and should be kept away from sparks and open flames.

- 5.3 When specified (par. 7.1), the supplier shall fill the containers so that the total contents of one container of the resin component, when mixed with the total contents of one container of the curing agent, shall constitute one unit.

6. INSPECTION

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

6.2 Testing

- 6.2.1 The procedures for rating the effects of change in CGSB standard 1-GP-71, Method 143.1 shall be used, as applicable, for evaluating performance.
- 6.2.2 **Panel Preparation** — All tests shall be carried out on the type of panel specified in the applicable CGSB standard 1-GP-71 or ASTM method, except the dry film thickness shall be $40 \pm 5 \mu\text{m}$. All films (excepting the film for slick resistance, par. 4.15) shall be cured 7 d before testing; hence, drying times in the methods are to be disregarded.
- 6.2.3 **Pot Life Test** — Mix the two components together according to the manufacturer's instructions in sufficient quantity to fill a 0.3 L container. Close the container for 15 min; then open it and measure the consistency of the coating (CGSB 1-GP-71, Method 4.5). Seal the container again and keep it under standard conditions (CGSB 1-GP-71, Method 103.1) for the specified time. At the end of this time, again measure the consistency as outlined above.
- 6.2.4 **Complete Cure** — Use CGSB standard 1-GP-71, No. 5, Method C, allowing the solvent to remain in contact with the film for 3 h.
- 6.2.5 **Gasoline Resistance** — Apply two coats of epoxy primer conforming to CAN/CGSB-1.165 and two coats of the coating under test, to sandblasted steel panels (CGSB 1-GP-71, Method 100.2) to a total dry film thickness of $150 \pm 15 \mu\text{m}$. Allow the panels to cure (air drying) 7 d (CGSB 1-GP-71, Method 103.1) and then test according to the last paragraph of CGSB standard 1-GP-71, Method 107.5.
- 6.2.6 **Applicability and Appearance by Spray Application** — Vertically mount a 600×900 mm smooth steel panel. Ensure that the panel is thoroughly clean and free of residual solvent or oil. Using a pressure feed spray gun² with an external mix air cap and a fluid nozzle with a 1.8 mm inside diameter, spray the coating, thinned up to 15% volume with a thinner conforming to CAN/CGSB-1.197, using an air pressure of about 350 kPa on the line and 70 to 140 kPa on the feed pot. Hold the gun 150 to 200 mm from the panel and adjust the width of the fan to about 200 mm. Apply the coating to the panel using horizontal strokes and lapping 50%. Control the speed of the gun and feed pressure to produce a smooth, uniform finish. It is not intended that this should necessarily produce a hiding coat. Allow the panel to dry in a vertical position and examine after 24 h.

7. NOTES

- 7.1 **Options** — The following options must be specified in the application of this standard:
- Colour required (par. 3.4)
 - Preparation for delivery, if other than as specified (par. 5.1 and 5.3).
- 7.2 **Recommended Practice**
- 7.2.1 This material may be used over high film build gloss epoxy coatings conforming to CAN/CGSB-1.153 but cannot be used over other coatings except as specified in par. 7.2.2, 7.2.3 and 7.2.4.
- 7.2.2 Metal surfaces should be clean, dry and free from oil, grease and corrosion products. They should then be treated with epoxy primer conforming to CAN/CGSB-1.165 in accordance with the manufacturer's instructions. When used for finishing the internal surfaces of storage tanks containing fuel conforming to CGSB standard 3-GP-24 (Avcat and JP5) and CAN/CGSB-3.25 (Avgas), a suitable primer and two coats of the epoxy coating should be applied to a total dry film thickness of $150 \pm 15 \mu\text{m}$.
- 7.2.3 Concrete block, concrete and brick shall have all loose material removed. Rough and porous surfaces shall first be coated with an emulsion filler conforming to CAN/CGSB-1.215 in accordance with the manufacturer's instructions.
- 7.2.4 With open-grained wood a filler recommended by the manufacturer should be used.

² The following combinations meet this requirement: DeVilbiss - MBC gun, E fluid tip and 78 air cap; Binks - Model 18 gun, 66 fluid tip and 63 PB air cap. Equivalent guns may be used.

7.3 Instructions for Use

- 7.3.1 Owing to the possibility of mixing errors, complete containers as defined in par. 5.3 should be used, providing all the material can be applied within 10 h of mixing.
- 7.3.2 Coatings should be applied to a wet-film thickness of 50 to 75 µm per coat, and only at 15 to 40°C and at relative humidities below 80% because atmospheric conditions affect the curing time, pot life and appearance.
- 7.3.3 Normally two coats of the epoxy coating are applied for architectural purposes. For chemical resistance, a minimum dry film thickness of 125 ± 15 µm of the system recommended by the manufacturer is required. The coating film may be recoated after 6 h. If recoating is carried out after 7 d, the film must first be lightly abraded.
- 7.3.4 The coating should be applied under conditions of adequate ventilation, and hygienic measures should be adopted to protect the worker's skin and health. The manufacturer's instructions must be adhered to.
- 7.3.5 The composition contains volatile flammable solvents, so proper precautions must be taken to eliminate the possibility of sparks or open flame during application and during drying. Good ventilation is essential.
- 7.3.6 This coating is most suitable for applying by spray when thinned in accordance with manufacturer's instructions. It may also be applied by brush and roller but care must be taken to avoid air entrapment. Brush or roller application of this coating is somewhat difficult and the final finish may be less uniform than when applied by spray. Brushing and roller coating should be restricted to areas where spray application is not practical.
- 7.3.7 When brushing or roller coating, natural bristle brushes conforming to CGSB specification 22.1 and roller sleeves conforming to CGSB specification 22.42 (Types 1 and 2) are recommended.
- 7.3.8 Care should be taken to clean equipment thoroughly at regular intervals and immediately after use with epoxy thinner. For brushes and rollers, cleaning with solvents must be followed by a soap and water rinse since the epoxy coating will cure even though immersed in solvents.

7.4 Related Publications

- 7.4.1 Canadian General Standards Board (CGSB)
CAN/CGSB-1.153 — High-Build, Gloss, Epoxy Coating
CAN/CGSB-1.215 — Two-Package Epoxy blockfiller
3-GP-24c — High Flash Type Aviation Fuel
CAN/CGSB-3.25 — Aviation Gasoline (Grades 80, 100 and 100LL)
22.1 — Flat Hog-Bristle Brushes for Paint, Varnish, Enamel and Lacquer
22.42— Paint Rollers and Accessories.

7.5 Sources of Referenced Publications

- 7.5.1 The publications referred to in par. 2.1.1 and 7.4.1 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.
- 7.5.2 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.
- 7.5.3 The publication 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., telephone (610) 832-9585, fax (610) 832-9555, or from the Global Info Centre Canada, 240 Catherine Street, Suite 305, Ottawa, Canada K2P 2G8, telephone (613) 237-4250, fax (613) 237-4251.
- 7.5.4 The publication referred to in par. 2.1.4 may be obtained from the Global Info Centre Canada, 240 Catherine Street, Suite 305, Ottawa, Ontario K2P 2G8. Telephone (613) 237-4250. Fax (613) 237-4251.



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