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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These CGSB standards and National Standards of Canada are hereby withdrawn due to limited use and support for their revision.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to be referred to for archival purposes only as their content has been repealed as of the date on this withdrawal notice.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.

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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 polyuréthannes (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-1.181-99

Supersedes CAN/CGSB-1.181-92

Ready-Mixed Organic Zinc-Rich Coating

National Standard of Canada

Canada



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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. CGSB neither assumes nor accepts any responsibility for any injury or damage that may occur during or as the result of tests, wherever performed.

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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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READY-MIXED ORGANIC ZINC-RICH COATING

Prepared by the
Canadian General Standards Board 

Approved by the
Standards Council of Canada 

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CANADIAN GENERAL STANDARDS BOARD

READY-MIXED ORGANIC ZINC-RICH COATING

1. SCOPE

- 1.1 This standard applies to a ready-mixed organic zinc-rich coating for general use on steel surfaces.
- 1.2 The coating is intended for repair of damaged steel surfaces which are coated with zinc-rich or galvanized coating.
- 1.3 The coating is intended for use in conditions subjected to normal and marine atmospheric exposures up to a maximum temperature of 95°C.
- 1.4 The coating may also be used as a primer.
- 1.5 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-8.2 — Sieves, Testing, Woven Wire, Metric.
 - 2.1.2 Health Canada
 - Hazardous Products Act.
 - 2.1.3 Transport Canada
 - Transport of Dangerous Goods Regulations.
 - 2.1.4 American Society for Testing and Materials (ASTM)
 - D 185 — Standard Test Methods for Coarse Particles in Pigments, Pastes, and Paints
 - D 521 — Standard Test Methods for Chemical Analysis of Zinc Dust (Metallic Zinc Powder).
- 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 consist of suitable unsaponifiable resins pigmented with finely divided zinc dust. It shall be supplied ready for brushing and shall be suitable for application by spray when thinned in accordance with the manufacturer's instructions.
- 3.2 The coating shall not skin, thicken excessively, cake or cause the container to bulge when stored in the original unopened container for six months from the date of shipment at temperatures between 5° and 40°C. At the end of this time it shall be capable of being readily mixed to a uniform condition by stirring and shall meet the requirements for applicability and appearance conforming to par. 4.10.

3.3 During the application of the coating, there shall not be more than a mild settling of the zinc pigment, which shall be readily reincorporated with mild agitation.

3.4 **Toxic Elements** — The coating shall be manufactured to conform to the requirements of the *Hazardous Products Act* for designated toxic elements.

4. DETAILED REQUIREMENTS

The coating shall comply with the following detailed requirements:

		Min.	Max.	Test Method	
				CGSB 1-GP-71	ASTM
4.1	Flash point, Pensky-Martens Closed Cup, °C	25	—	3.1	—
4.2	Water content, % by mass	—	0.1	24.1	—
4.3	Volatile matter, % by mass	—	40	17.1	—
4.4	Coarse particles, retained on a 45 µm (No. 325) sieve ¹ , % by mass	—	1.0	—	D 185
4.5	Metallic content, as zinc, % by mass of non-volatile matter	87	—	(Par. 6.2.2)	—
4.6	Drying Time and Recoatability				
4.6.1	Hard Dry — The coating shall dry hard in not more than 8 h.				
4.6.2	Recoatability — After the coating has dried 8 h, the application of additional coats shall not cause lifting, softening, blistering or other film irregularities when tested in accordance with CGSB standard 1-GP-71, No. 5, Method A.				
4.7	Salt Spray Resistance — When the dried film of the coating has been scored and then subjected to 720 h in the salt spray cabinet, there shall be no blistering of the film or corrosion extending more than 2 mm beyond the width of the scribe when tested in accordance with par. 6.2.1 and CGSB standard 1-GP-71, Method 129.2.				
4.8	Impact Resistance — The cured coating film shall show no cracking, flaking or loss of adhesion at the point of direct impact after the application of 18 J when tested in accordance with par. 6.2.1 and CGSB standard 1-GP-71, Method 147.1. ²				
4.9	Water Resistance — When tested in accordance with par. 6.2.1 and CGSB standard 1-GP-71, Method 110.1, the panel shall show no rusting, softening, loss of adhesion or blistering after immersion for 48 h in distilled water at 40°C. The adhesion and hardness of the coating on the submerged portion shall be equal to that of the unsubmerged portion when examined immediately after removal from the water and after conditioning 4 h at room temperature.				
4.10	Applicability and Appearance — When sprayed to a dry film thickness of 90 ± 15 µm, the coating shall have good flowout and levelling and shall produce no ridges or sagging when tested in accordance with par. 6.2.3.				
4.11	Cathodic Protection — When immersed in synthetic sea water for 30 d, the coating shall prevent corrosion in the 40 mm circular bare area when tested in accordance with par. 6.2.4.				

5. PREPARATION FOR DELIVERY

5.1 Unless otherwise specified (par. 7.1), normal commercial packaging, packing and marking shall be acceptable.

5.2 Labelling

5.2.1 **Toxic Elements** — The coating shall be labelled to conform to the requirements of the *Hazardous Products Act* for designated toxic elements.

¹See CAN/CGSB-8.2.

²Except grit-blasted panels prepared in accordance with CGSB 1-GP-71, Method 100.2 shall be used.

- 5.2.2 In addition to 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-1.181-99

NATO stock number (when required)

Manufacturer's name and address

Manufacturer's batch number

Manufacturer's code number

Date of manufacture

Thinning instructions using a recommended thinner.

- 5.2.3 **Cautionary Labelling** — In addition to any special markings specified (par. 7.1), each container shall have affixed a lithographed or stencilled warning label of appropriate size, stating the hazards concerning flammability, the precautions to be taken during use of the material, storage conditions and the medical attention required in event of contact with the skin or eyes. The label shall also conform to the requirements of the *Transport of Dangerous Goods Regulations* concerning the flammability of the ingredients. Mixing instructions shall also be provided on an instruction sheet supplied with each shipment.

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 Panel Preparation

- 6.2.1.1 Using the spray apparatus recommended by the manufacturer, apply the coating to grit-blasted steel panels prepared according to CGSB standard 1-GP-71, Method 100.2 to give a dry film thickness of $90 \pm 15 \mu\text{m}$. For corrosion tests, coat both sides and dip the edges of the panels.

- 6.2.1.2 Unless otherwise specified, dry the panels for one week under standard conditions as specified in CGSB standard 1-GP-71, Method 103.1.

- 6.2.2 **Metallic Content of Non-volatile Solids** — Where necessary, carry out the pigment separation on a suitable portion of the sample in accordance with CGSB standard 1-GP-71, Method 21.1. Determine the total zinc in accordance with ASTM D 521 and calculate the zinc present (Z) based on the original sample. Finally, calculate the percent total zinc based on non-volatile matter as follows:

Metallic content, Zn, % = $(Z \times 100)/NV$

where:

Z = % total zinc based on original sample

NV = % of non-volatile matter of the original sample.

6.2.3 Applicability and Appearance

- 6.2.3.1 **Procedure** — Using the apparatus in accordance with the manufacturer's instructions, spray sufficient coating on the panel to produce a continuous wet film that will dry to the specified film thickness. Allow the coating to dry for 6 h in a vertical position and examine for sagging, ridges or other signs of poor flowout or levelling not attributable to the spraying technique.

- 6.2.4 **Cathodic Protection for Qualification Purposes** — Using $100 \times 150 \times 3$ mm grit-blasted panels, prepared according to CGSB standard 1-GP-71, Method 100.2, mask a 40 mm diameter circle in the centre of the face of each panel with a circular magnet; then apply and dry the coating as outlined in par. 6.2.1. Remove the magnet from the masked area prior to drying the panels. Immerse the panels upright in 1.2 L of synthetic sea water, (prepared according to CGSB standard 1-GP-71, Method 113.2) contained in a 1.5 L borosilicate glass beaker. Keep the water

level constant during the test by the addition of distilled water and maintain the temperature at $23 \pm 2^{\circ}\text{C}$. At the end of 30 d, examine the immersed panels for corrosion. Conduct the test in triplicate using a separate beaker and panel for each trial, and report results on all three samples. At least two shall pass the requirement of par. 4.11.

7. NOTES

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

- a. Packaging, packing and marking details, if normal commercial practice is not suitable (par. 5.1).

7.2 Recommended Practice

7.2.1 The coating, as received, should be applied by brush and may be sprayed when reduced with thinner as recommended in the manufacturer's instructions. Spray application should be from an agitated pressure pot and the material slowly agitated during application. Coatings should be applied in a single continuous wet film to a dry thickness of 75 to 125 μm .

7.2.2 When topcoats are required, they should be applied only in accordance with the recommendations of the manufacturer.

7.2.3 Because the coating contains zinc, it is not resistant to acids or to alkalis.

7.3 Surface Preparation

7.3.1 Metal surfaces should be clean, dry and free from oil, grease and corrosion products. For immersion service the surface should be blast cleaned to white metal in accordance with SSPC-SP 5/NACE No. 1, and the resultant surface appearance should be as shown in Pictorial Standard A, B, C or D Sa 3 of SSPC-Vis 1 or ASTM D 2200. For less critical exposures, the surface should be blast cleaned to near-white metal in accordance with SSPC-SP 10/NACE No. 2 as a minimum, and the resultant surface appearance should be as shown in Pictorial Standard A, B, C or D Sa 2-1/2 of SSPC-Vis 1. However, for less critical exposures and where circumstances do not permit blasting, it is permissible to power-disc sand general areas to bright metal and power brush bolt heads, nuts and rivets to bright metal if agreed to, by the contracting parties.

7.3.2 For more information about surface preparation, see CAN/CGSB-85.10.

7.4 Related Publications

7.4.1 Canadian General Standards Board (CGSB)

CAN/CGSB-85.10 — Protective Coatings for Metals.

7.4.2 American Society for Testing and Materials (ASTM)

D 2200 — Pictorial Surface Preparation Standards for Painting Steel Surfaces.

7.4.3 Society for Protective Coatings (SSPC)

Visual Standard for Abrasive Blast Cleaned Steel (SSPC-Vis 1).

7.4.4 Society for Protective Coatings (SSPC)/National Association of Corrosion Engineers (NACE)

SSPC-SP 5/NACE No. 1 — White Metal Blast Cleaning

SSPC-SP 10/NACE No. 2 — Near-White Blast Cleaning.

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 K1A 0K9. 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 Canada Communication Group Inc., Publishing, Ottawa, Canada K1A 0S9. Telephone (819) 956-4802.
- 7.5.4 The publications referred to in par. 2.1.4 and 7.4.2 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 Canada, 240 Catherine Street, Suite 305, Ottawa, Ontario K2P 2G8. Telephone (613) 237-4250 or 1-800-854-7179. Fax (613) 237-4251.
- 7.5.5 The publications referred to in par. 7.4.3 and 7.4.4 may be obtained from the Society for Protective Coatings Steel, suite 407, 40, 24th Street, Pittsburgh, PA 15222, U.S.A.
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