

Canadian General Standards Board

CGSB

Office des normes générales du Canada

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**CAN/CGSB-1.161-M91
December/Décembre 1991**

WITHDRAWAL

October 1998

**CANADIAN GENERAL
STANDARDS BOARD**

**COLD-APPLICATION COAL TAR BASE
COATING**

This standard is hereby withdrawn because as far as
can be determined it is no longer being used.

RETRAIT

Octobre 1998

**OFFICE DES NORMES
GÉNÉRALES DU CANADA**

**REVÊTEMENT À BASE DE GOUDRON DE
HOUILLE, APPLICATION À FROID**

Cette norme est retirée par le présent avis parce que, dans
la mesure où il est possible de le constater, elle n'est plus
utilisée.

Canada

NATIONAL STANDARD OF CANADA

CAN/CGSB-1.161-M91

Supersedes 1-GP-161M

Cold-Application Coal Tar Base Coating



QUALITY

Withdrawn/Retired

Canadian General Standards Board

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COLD-APPLICATION COAL TAR BASE COATING

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Acknowledgment is made for the French translation of this National Standard of Canada by the Translation Bureau of the Department of the Secretary of State.

CANADIAN GENERAL STANDARDS BOARD

COLD-APPLICATION COAL TAR BASE COATING

1. SCOPE

- 1.1 This standard applies to cold-application coal tar base coating for protecting steel structures and compartments from corrosion and in areas where the degree of surface preparation obtained is limited.
- 1.2 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 publication is applicable to this standard:
- 2.1.1 Canadian General Standards Board (CGSB)
1-GP-71 — Methods of Testing Paints and Pigments.
- 2.2 Reference to the above publication is to the latest issue, unless otherwise specified by the authority applying this standard. The source for this publication is shown in the Notes section.

3. GENERAL REQUIREMENTS

- 3.1 Coal tar base coating to this standard shall consist of a homogeneous mixture of a plasticized coal tar pitch, coal tar base solvents, and inert non-water-absorbent mineral filler.
- 3.2 The coating shall be free from asphalt and oil gas tars and pitches, and shall be suitable for brushing or spraying to provide complete coverage.
- 3.3 The coating shall not thicken excessively or cake in the original unopened container for two years from date of shipment when stored at temperatures not exceeding 40°C. At the end of this time, it shall readily mix to a uniform condition by simple stirring and shall meet the requirements for drying time in accordance with par. 4.3 and applicability and appearance in accordance with par. 4.8.

4. DETAILED REQUIREMENTS

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

	Min.	Max.	Text Method 1-GP-71
4.1 Flash point, Pensky-Martens, Closed Cup, °C	52	—	3.1
4.2 Consistency, Krebs units	97	105	4.5 (Note 1)
4.3 Drying time, h			5.1 (Note 2)
Surface-dry	—	18	
Dry for recoat	—	24	
4.4 Benzene	—	Nil	65.1
4.5 Ash, % by mass	18	20	69.3

Note 1: Using Stormer cylinder instead of paddle.

Note 2: Applied to a dry film thickness of 125 ± 10 µm.

- 4.6 **Adhesion and Flexibility** — The coating applied at a dry film thickness of $125 \pm 10 \mu\text{m}$ shall not lose adhesion, check, crack, peel or otherwise lose its protective value when bent at -18°C over a 3.2 mm diameter mandrel when tested in accordance with CGSB standard 1-GP-71, Method 119.4.
- 4.7 **Direct Impact Resistance** — When a 1 kg ball is dropped 2.5 m, the coating shall show no visible signs of chipping, cracking or detachment from the steel plate and shall have firm adhesion outside the impact area when tested in accordance with par. 6.2.
- 4.8 **Applicability and Appearance** — When panels are dipped into the material and then suspended in a vertical position, the coating shall be even and continuous with a wet film thickness of $250 \pm 50 \mu\text{m}$. After drying in the same position, there shall be no uncoated bare metal, when tested in accordance with par. 6.3.
- 4.9 **Long-Term Immersion** — Coated steel panels shall withstand two years immersion in synthetic sea water without blistering, loss of adhesion, or cracking of the coating or corrosion of the substrate, when tested in accordance with par. 6.4.
5. **PREPARATION FOR DELIVERY**
- 5.1 Unless otherwise specified (par. 7.1), packaging, packing and marking shall conform to normal commercial practice.
- 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-1.161-M91
 - NATO stock number (when required)
 - Manufacturer's name and address
 - Manufacturer's batch number
 - Manufacturer's code number
 - Date of manufacture.
6. **INSPECTION**
- 6.1 **Sampling** — Sampling shall be carried out in accordance with CGSB standard 1-GP-71, Method 1.1
- 6.2 **Impact Resistance** — Apply (CGSB 1-GP-71, Method 98.1) one coat of the material by brush to $150 \times 150 \times 3 \text{ mm}$ hot-rolled steel panels at the rate of 5 to $6 \text{ m}^2/\text{L}$, 150 to $175 \mu\text{m}$ thick wet. When the first coat of the material has dried 24 h, apply a second coat to produce an additional wet film thickness of 150 to $175 \mu\text{m}$. After air drying 96 h (CGSB 1-GP-71, Method 103.1), place the coated panel firmly on a solid horizontal base and drop a 1 kg steel ball vertically from a height of 2.5 m, so that the impact will be at the centre of the specimen. Visually examine the film for defects.
- 6.3 **Applicability and Appearance** — Dip tin-plated panels (CGSB 1-GP-71, Method 101.1) into the coating, remove after 15 s immersion and condition (CGSB 1-GP-71, Method 103.1) in a vertical position. Check the wet film thickness immediately after flow-off ceases. After drying for 4 h, examine the film for continuity.
- 6.4 **Long-Term Immersion** — Immerse steel panels (CGSB 1-GP-71, Method 100.2) coated with the material specified in par. 6.2 for two years in synthetic sea water in accordance with CGSB standard 1-GP-71, Method 113.2.
7. **NOTES**
- 7.1 **Option** — The following option must be specified in the application of this standard:
- a. Packaging, packing and marking details, if other than normal commercial practice (par. 5.1).
- 7.2 **Source of the Referenced Publication** — The publication referred to in par. 2.1.1 may be obtained from the Canadian General Standards Board, Sales Unit, Ottawa, Canada K1A 1G6. Telephone (819) 956-0425 or 956-0426. Fax (819) 956-5644.