

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 01 74 21 - Construction/Demolition Waste Management System.
- .2 Section 03 30 00 - Cast-in-Place Concrete.
- .3 Section 03 20 00 - Concrete Reinforcing.
- .4 Section 03 10 00 - Concrete Forming and Accessories.

1.2 References

- .1 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-25.20-95, Surface Sealer for Floors.
- .2 Canadian Standards Association (CSA)
  - .1 CSA-A23.1-09/A23.2-09, Concrete Materials and Methods of Concrete Construction.
- .3 NCHRP Standard 244-82 (R2013), "Concrete Sealers for Protection of Bridge Structures".

1.3 Performance Requirements

- .1 Product quality and quality of work in accordance with Section 01 61 00 - Common Product Requirements.

1.4 Product Data

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit WHMIS MSDS - Material Safety Data Sheets - Hazardous Materials. WHMIS MSDS acceptable to Labour Canada and Health and Welfare Canada for concrete floor treatment materials. Indicate VOC content.

1.5 Environmental Requirements

- .1 Electrical power:
    - .1 Provide sufficient electrical power to operate equipment normally used during construction.
  - .2 Work area:
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- .1 Make the work area water tight, protected against rain and detrimental weather conditions.
- .3 Temperature:
  - .1 Maintain ambient temperature of not less than 40°F (10°C) from 7 days before installation to at least 48 hours after completion of work and maintain relative humidity not higher than 40% during same period.
- .4 Moisture:
  - .1 Ensure concrete substrate is within moisture limits prescribed by flooring manufacturer.
- .5 Safety:
  - .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.

## PART 2 - PRODUCTS

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|------------------------------|----|---|
| <u>2.1 Curing Compounds</u>  | .1 | Curing Compounds: to Section 03 30 00 - Cast-In-Place Concrete.   |
| <u>2.2 Sealing Compounds</u> | .1 | 100% Silane Solution concrete sealer to NCHRP 24, Series II Reduction of Water Absorption. Ensure compatibility with waterproofing membrane where applicable. |

## PART 3 - EXECUTION

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|------------------------|----|---|
| <u>3.1 Examination</u> | .1 | Verify that surfaces are ready to receive work and elevations are as indicated on shop drawings.  |
| <u>3.2 Execution</u>   | .1 | Finish concrete in accordance with CSA A23.1/A23.2.   |
|                        | .2 | Provide finishes to concrete slabs as follows: <ul style="list-style-type: none"><li>.1 Suspended exterior slabs even broom finish, flatness "Class B" as per CAN/CSA A23.1.</li><li>.2 Submit procedure and quality control plan to ensure achievement of specified tolerances to Departmental Representative for review prior to commencing work on floors.</li></ul> |
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- .4 Do not overwork surfaces.
- .5 Use procedures acceptable to Departmental Representative to remove excess bleed water. Ensure surface is not damaged.
- .6 Rub exposed sharp edges of concrete with carborundum to produce 1/8" (3 mm) radius edges unless otherwise noted.

### 3.3 Application

- .1 After treatment is dry, seal joints at junction with vertical surfaces with sealant.
- .2 Clean overspray. Clean sealant from adjacent surfaces.
- .3 After concrete has cured and surface of concrete is dry, apply one coat of silane concrete sealer uniformly to all surfaces of deck, and curbs.
- .4 First Application: 165mL/m2
- .5 Do not apply silane concrete sealer to damp surface. Allow coatings to thoroughly dry prior to applying subsequent coatings.

### 3.4 Protection

- .1 Protect finished installation in accordance with manufacturer's instructions.

### 3.5 Tolerances

- .1 Concrete finishing tolerance in accordance with CSA A23.1/A23.2 for finish classification noted above.
- .2 A permitted variation in any part of the construction or in any section of the specification shall not be construed as permitting violation of more stringent requirements for any other part of construction or in any specification section.