
Part 1 GENERAL

1.1 RELATED SECTIONS

- .1 07 92 00 – Joint Sealants

1.2 REFERENCE STANDARDS

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM C 309-03, Liquid Membrane-Forming Compounds for Curing Concrete.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-25.20-95, Surface Sealer for Floors.
- .2 CSA International
 - .1 CAN/CSA-A23.1-14/A23.2-14, Concrete Materials and Methods of Concrete Construction//Methods of Test for Concrete.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Provide manufacturer's printed product literature and data sheets for concrete finishes and include product characteristics, performance criteria, physical size, finish and limitations.
 - .1 Provide WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements, Section 01 35 43 - Environmental Procedures.
 - .1 WHMIS MSDS acceptable to Labour Canada and Health and Welfare Canada for concrete floor treatment materials.
 - .2 Indicate VOC content in g/L.
 - .2 Include application instructions for concrete floor treatment(s).

1.4 QUALITY ASSURANCE

- .1 Quality Assurance: in accordance with Section 01 45 00 - Quality Control.
- .2 Minimum 4 weeks prior to starting concrete finishing work, provide proposed quality control procedures for review by Departmental Representative on following items:
 - .1 Hardening.
 - .2 Sealing.
 - .3 Curing.
 - .4 Finishes.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements:
 - .1 Deliver materials to site in original factory packaging, labelled with manufacturer's name, address.

1.6 SITE CONDITIONS

- .1 Temporary lighting: Minimum 1200 W light source, placed 2.5 m above floor surface, for each 40 sq m of floor being treated.
- .2 Electrical power: Provide sufficient electrical power to operate equipment normally used during construction.
- .3 Work area: Make work area water tight protected against rain and detrimental weather conditions.
- .4 Temperature: Maintain ambient temperature of not less than 10 degrees 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.
- .5 Moisture: Ensure concrete substrate is within moisture limits prescribed by flooring manufacturer. Concrete finishing contractor to be responsible for coordination of surface requirements with flooring contractor.
- .6 Safety: Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.
- .7 Ventilation:
 - .1 Departmental Representative Will arrange for ventilation system to be operated during installation of concrete floor treatment materials. Ventilate area of work as directed by Departmental Representative by use or approved portable supply and exhaust fans.
 - .2 Ventilate enclosed spaces in accordance with Section 01 51 00 - Temporary Utilities.
 - .3 Provide continuous ventilation during and after coating application.

Part 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- .1 Product quality and quality of work in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Submit written declaration that components used are compatible and will not adversely affect finished flooring products and their installation adhesives.

2.2 CHEMICAL HARDENERS

- .1 Type 1 – One component liquid sodium silicate surface hardener.
- .2 Water: potable.

2.3 SEALING COMPOUNDS

- .1 Surface sealer: to CAN/CGSB-25.20, Type 2 - water based.
 - .1 Verify compatibility with subsequent finishes.
- .2 Sealants: maximum VOC limit 250 g/L in accordance with manufacturer's written instructions.
- .3 Surface sealers are not manufactured or formulated with aromatic solvents, formaldehyde halogenated solvents, mercury lead cadmium hexavalent chromium and their compounds.

2.4 CURING COMPOUNDS

- .1 Waterborne membrane forming curing membrane to ASTM C 309, Type 1 Clear Class B.
 - .1 Verify compatibility with subsequent finishes.

2.5 MIXES

- .1 Mixing ratios in accordance with manufacturer's written instructions.

2.6 JOINT SEALANTS

- .1 Joint sealants to Section 07 92 00 – Joint Sealants.

Part 3 EXECUTION

3.1 EXAMINATION

- .1 Verify that slab surfaces are ready to receive work and elevations are as indicated on drawings by manufacturer.

3.2 PREPARATION OF EXISTING SLAB

- .1 Rub exposed sharp edges of concrete with carborundum to produce 3 mm radiused edges unless otherwise indicated.
- .2 Saw cut control joints to CAN/CSA-A23.1, 24 hours maximum after placing of concrete.

3.3 APPLICATION

- .1 Apply concrete finishing floor hardener in accordance with manufacturer's written instructions.
- .2 After floor treatment is dry, seal control joints and joints at junction with vertical surfaces with sealant.

- .1 Sealants: Section 07 92 00 – Joint Sealants.
- .3 Apply floor treatment in accordance with Sealer manufacturer's written instructions.
- .4 Clean over spray. Clean sealant from adjacent surfaces.

3.4 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.5 PROTECTION

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

END OF SECTION