

## **PART 1 – GENERAL**

### **1.1 RELATED WORK**

- .1 Division 1: General Requirements.
- .2 Section 03 20 00: Concrete Reinforcing.
- .3 Section 03 30 00: Cast-in-Place Concrete.
- .4 Section 07 92 00: Joint Sealants.

### **1.2 REFERENCE STANDARDS**

- .1 Canadian Standards Association (CSA International)
  - .1 CSA A23.1-14/A23.2-14, Concrete Materials and Methods of Concrete Construction/Test Methods and Standard Practices for Concrete
- .2 American Society for Testing and Materials (ASTM International)
  - .1 ASTM C109/C109M-13e1, Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
  - .2 ASTM C309-11, Standard Specification for Liquid Membrane Forming Compounds for Curing Concrete

## **PART 2 – PRODUCTS**

### **2.1 MATERIALS**

- .1 Concrete materials and reinforcement: in accordance with Sections 03 20 00 and 03 30 00.
- .2 Concrete curing compound to be high solids, water based, VOC compliant curing and sealing compound to ASTM C309. Concrete curing compound shall be compatible with asphalt based adhesives. Acceptable products: Vocomp 20 by W.R. Meadows, (Kure-n-Seal WB by BASF,) (Masterkure / ) Kure 200W by BASF, Super Aqua-Cure VOX by Euclid Chemical Company or approved equal. Unless specified elsewhere herein, apply curing compound to manufacturer's written instructions.
- .3 Additives, admixtures, curing compounds and sealers are to be compatible.

## **PART 3 – EXECUTION**

### **3.1 WORKMANSHIP**

- .1 All work shall be in accordance with CSA A23.1 except where specified otherwise.
- .2 Steel trowel concrete slabs to be left exposed.
- .3 Slope portions of slabs as indicated on the drawings.

- .4 Ensure formwork and embedded metal parts are not disturbed or displaced during the finishing operation.

### **3.2 PLAIN FLOOR FINISHES**

- .1 Consolidate concrete by vibrating to force coarse aggregate into concrete mix and then screed.
- .2 Float surface with wood or metal floats or with power finishing machine and bring surface to true grade.
- .3 Steel trowel to smooth and even surface in accordance with CSA A23.1, Table 22, Class A.
- .4 After Item 3.2.3 of this Section, follow with second steel trowelling to produce smooth burnished surface to within 8 mm tolerance when measured in any direction using a 3 m straight edge.
- .5 Sprinkling of dry cement or dry cement and sand mixture over concrete surfaces is not acceptable.
- .6 Saw cut control joints in slabs-on-grade within 12 hours after finishing. Use 5 mm thick blade, cutting to 1/3 of slab thickness or as shown on drawings. Control joints to be located as shown on the drawings. Fill joints with sealant. Saw cut crack control joints to CSA A23.1.
- .7 All concrete slabs shall be cured as follows:  
  
Method 1 – If air temperature is between 5°C and 26°C, apply curing compound in strict accordance with manufacturer's instructions at the rate of 7 square meters per litre.  
Method 2 – If air temperature is 27°C or above, cure the slab by continuous wet curing for a minimum of 5 days. Cover slab with a burlap or non-woven geotextile fabric immediately after finishing of concrete. Water shall not be allowed to drip, flow, or puddle on the concrete slab. Equipment and materials necessary for water curing shall be on site and ready for use prior to concrete placement. Following the 5 days of wet curing and immediately after surface water is removed, apply curing compound in strict accordance with manufacturer's instructions at the rate of 7 m<sup>2</sup> per litre.  
  
(Note: Method 2 may be used in place of Method 1)
- .8 After curing and when concrete is dry, seal all slab floor joints at junction with vertical surfaces with joint sealant.

### **3.3 EXTERIOR PADS**

- .1 Float and trowel concrete walkways as per Clause 3.2.
- .2 Immediately after floating, give surface a uniform broom finish to produce regular corrugations not exceeding 2 mm deep, by drawing broom in direction normal to center line.
- .3 Provide edging as indicated with 10 mm radius edging tool.

- .4 All exterior slabs shall be protected with two applications of commercial-grade boiled linseed oil mixed with varsol. The first application shall be a mixture of equal parts of oil and varsol applied on a dry surface at a rate of 10 m<sup>2</sup>/l. The second application shall be from one half to full strength oil applied at a rate of 15 m<sup>2</sup>/l after the first treatment has been absorbed.
- .5 All exterior concrete to be cured by continuous wet curing for a minimum of 7 days.

**END OF SECTION**