

UNIVERSITY OF SOUTHERN CALIFORNIA
HEALTH SCIENCES CAMPUS
NORRIS HEALTHCARE CENTER
LOS ANGELES, CALIFORNIA

SECTION 03 3900

CONCRETE CURING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes initial and final curing for cast-in-place concrete and structural lightweight concrete.
- B. Related Sections:
 - 1. Pertinent Sections of Division 1.
 - 2. Section 03 1000 – Concrete Forms and Accessories.
 - 3. Section 03 3000 – Cast-In-Place Concrete.

1.2 REFERENCES

- A. ACI 301 – Specifications for Structural Concrete.
- B. ACI 302 - Recommended Practice for Concrete Floor and Slab Construction.
- C. ACI 308 - Standard Practice for Curing Concrete.
- D. ASTM C171 - Sheet Materials for Curing Concrete.
- E. ASTM C309 - Liquid Membrane-Forming Compounds for Curing Concrete.
- F. ASTM D2103 - Polyethylene Film and Sheeting.

1.3 SUBMITTALS

- A. Submit under pertinent provisions of Division 1 - Submittals.
- B. Product Data: Provide data on curing compounds, compatibilities, and limitations.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 301.

1.5 REGULATORY REQUIREMENTS

- A. Perform Work in accordance with 2011 City of Los Angeles Building Code and Chapter 19, "Concrete", of the California Code of Regulations, Title 24 - Building Standards, Part 2, 2010 California Building Code with State Amendments.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products under pertinent provisions of Division 1.

- B. Deliver curing materials in manufacturer's packaging including application instructions.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Membrane Curing Compound: ASTM C309 Type 1
- B. Water: Potable, not detrimental to concrete.
- C. Polyethylene film or approved curing film.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that substrate surfaces are ready to be cured.

3.2 EXECUTION - HORIZONTAL SURFACES AND VERTICAL SURFACES

- A. Concrete shall be maintained above 50°F, and in a moist condition for at least the first 7 days after placing, except that high early strength concrete shall be maintained in such a condition for at least the first 3 days.
- B. Forms containing concrete, top of concrete between forms, and all exposed concrete surfaces after removal of forms shall be maintained in a thoroughly moist condition for not less than 7 consecutive days after placing.
- C. If weather is hot or surface has dried out, spray surface of concrete slabs and paving with fine mist of water, starting not later than 2 hours after final troweling and continuing until sunset. Surface of finish shall be kept continuously wet until curing medium has been applied.
- D. Spraying: Spray water over floor slab areas and maintain moist for 7 days.

3.3 PROTECTION OF FINISHED WORK

- A. Protect finished Work under pertinent provisions of Division 1 – Quality Control.
- B. Do not permit traffic over unprotected floor surface.

3.4 SCHEDULES

- A. Storage Area Slabs: Absorptive mats, burlap-polyethylene type or moisture for 7 days minimum.
- B. Retaining Walls: Membrane curing compound, acrylic type, clear color.
- C. Concrete Pavement: Membrane curing compound, opaque color.

All Other Floor Areas: Keep continuously moist for a minimum of 7 days.

END OF SECTION 03 3900