

SECTION 702**CONCRETE CURING MATERIALS AND ADMIXTURES**

SCOPE

702.01.01 MATERIALS COVERED

- A. This specification covers concrete curing materials, air-entraining admixtures, water retardants, supplementary cementitious materials (SCMs), and hydrated lime. Comply with **Section 722, "Water"** for mixing and curing. The Contractor shall submit a request to use any one of the following for approval by the Engineer as prescribed in **Subsection 702.03.06 "Submittal."**

REQUIREMENTS

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PHYSICAL PROPERTIES AND TESTS

702.03.01 CURING MATERIALS

- A. Curing materials shall conform to the requirements of the following tests, except the curing compound shall not react harmfully with the components of concrete or contain oils, waxes, or other materials which would prevent bonding of traffic marking paints. The film of curing compound shall be continuous, uniform, and free from pinholes, bubbles, or blisters.:
1. Burlap Cloth made from Jute or Kenaf: AASHTO M182.
 2. Waterproof Paper for Curing Concrete: AASHTO M171.
 3. Liquid Membrane-Forming Compounds for Curing Concrete: ASTM C309.
 4. Pigmented Curing Compound for Portland Cement Concrete pavement: ASTM C309, except the loss of water from the surface in the water retention test shall not exceed 1.50 ounces per square foot in 72 hours.
 5. White Pigmented Curing Compound for Bridge Decks: ASTM C309. Type 2 Class B resin type and shall be poly-alpha-methyl-styrene with the loss of water from the surface in the water retention test shall not exceed 0.50 ounce per square foot in 24 hours or more nor 1.50 ounces per square foot in 72 hours.
 6. Plastic Sheeting: ASTM C171.
 7. White Polyethylene Sheeting (film) for Curing Concrete: ASTM C171.

702.03.02 AIR-ENTRAINING ADMIXTURES

- A. Air-entraining admixtures shall conform to ASTM C260.

702.03.03 ADMIXTURES OTHER THAN AIR-ENTRAINING

- A. These admixtures shall comply with ASTM C494 and shall be clearly marked as to Type A, B, C, D, E, F, or G.

702.03.04 SUPPLEMENTARY CEMENTITIOUS MATERIALS (SCMs)

- A. Coal Ash admixture shall conform to **Section 729, "Supplementary Cementitious Materials (SCMs)"**

702.03.05 HYDRATED LIME

- A. Hydrated lime shall conform to ASTM C207, Type N.

702.03.06 SUBMITTAL

- A. Curing compounds and admixtures shall be tested and certified in accordance with the Table 1 frequency.
1. Prior to the use of these materials, the Contractor shall submit to the Engineer for approval a document certifying that the material meets these specifications and requirements.
 2. A test certificate shall be included with the certifying document.
- B. The material supplier for Portland cement concrete materials, plantmix bituminous materials, or any material production that requires the use of admixtures shall attach the certificate to the mix design submittal as indicated in Table 1. All subsequent certificates shall be on file and accessible to the Engineer for audit purposes.
- C. The Statute of Limitations duration for the record storage shall be as required by the Nevada Revised Statutes.

Table 1 - Quality Control Testing		
Material	Certificate	Frequency
All curing materials	Sample and certification	1 per project
All admixture material	Certificate with copy of test for lot used	1 per lot