

Section 4105. Liquid Curing Compounds

4105.01 GENERAL REQUIREMENTS.

Comply with AASHTO M 148 and the following requirements.

4105.02 SPRAYABILITY.

Use compounds of a consistency that they can be readily applied by spraying to a uniform coating at a material temperature above 40°F (4°C).

4105.03 MOISTURE RETENTION.

Efficiency index of the material shall not be less than 95.0% when tested according to Office of Materials Test Method No. Iowa 901. Material showing moisture loss of less than 1.0% of the quantity of water remaining in the test specimen at the time the curing material is applied will also be acceptable. White pigmented liquid curing compounds, when tested in accordance with ASTM C 156 using an application rate of 200 square feet per gallon (5 m²/L) shall restrict the loss of water to not more than 0.20 kg/m² in 24 hours or 0.40 kg/m² in 72 hours.

4105.04 DRYING TIME.

Use liquid curing compounds that:

- Dry to the touch in no more than 4 hours, and
- Do not track off the concrete when walked upon after 12 hours.

4105.05 WHITE PIGMENTED COMPOUNDS.

- A. Use compounds consisting of finely ground white pigment and vehicle, ready mixed for use without alteration.
- B. Ensure the pigment does not:
 - Settle excessively or cake in the container, and
 - Thicken in storage to cause a change in consistency which may result in a nonuniform spray.
- C. Use a compound that after being sprayed on a test slab and drying has an apparent daylight reflectance no less than 60% relative to magnesium oxide.
- D. Use an application rate of no less than 0.067 gallon per square yard (0.3 L/m²) (15 square yards per gallon (3.3 m²/L)).
- E. Agitate the compound just prior to it being removed from the container. Agitate it continuously during application.

4105.06 DARK COLORED COMPOUNDS.

Use asphalt emulsion or asphalt cut back with a volatile solvent. Use a mixture containing no less than 50.0% asphalt. Use an application rate of no less than 0.08 gallon per square yard (0.36 L/m²) (12.5 square yards per gallon (2.8 m²/L)).

4105.07 CLEAR COMPOUNDS.

Apply the following in lieu of other requirements of this section:

- A. Use clear liquid membrane curing compounds complying with the requirements of AASHTO M 148, Type 1-D, Class A. Use only one type of compound on a structure. Do not use different compounds on the same structure.
- B. Inspection and acceptance of clear compounds for curing will be according to [Materials I.M. 405.07](#).

4105.08 CARRYOVER STOCK.

- A. Approvals of individual lots of curing compound are valid for the year in which the compound is manufactured.
- B. Lots of 5 barrels (1000 L) or more of white pigmented compound which have been carried over the winter will be retested if stored in a heated warehouse.
- C. Do not use carryover lots of white pigmented compound less than 5 barrels (1000 L).

D. Do not use carryover lots of curing compounds which have been frozen.