

Colorado Procedure – Laboratory 2202-15

Standard Method of Test for

Test of Protective Covering for Bridge Deck Waterproofing Membrane

1. SCOPE

- 1.1 This Procedure describes the method of test for the protective covering for bridge deck waterproofing membrane.

2. APPARATUS

- 2.1 Metal test block, 2" x 2" x 3", with rounded corners of 1/2" radius.
- 2.2 Water bath, automatically controlled, permitting accurate and uniform control of immersion temperature of 77°F \pm 0.2°.
- 2.3 Oven, capable of maintaining a temperature of 176°F \pm 5°.
- 2.4 Balance, having sufficient capacity and sensitive to 0.01 grams.

3. PREPARATION OF SPECIMENS

- 3.1 Cut from the sample at least 5 test specimens, not from adjacent locations in the sheet, and each being 1" x 8" for the bend test.
- 3.2 Cut two test specimens, each approximately 4" x 4" for original weight, weight loss, and behavior on heating tests. Specimens shall not be from the ends or sides, and shall not be from adjacent locations in the sheet.

4. TEST PROCEDURES

- 4.1 Place the bend-test specimens (from Subsection 3.1) in the water bath at 77°F for 30 minutes. Remove and immediately bend each specimen, with the weather-side up, at a uniform rate over the rounded edge of the test block. While bending the specimens over the block, exert only the pressure needed to keep it in contact with the block (avoid kinking). Any surface rupture exceeding 1/8" in length is to be considered a failure. At least 4 of 5 strips shall pass the bend test.
- 4.2 Measure 4" X 4" specimen (from Subsection 3.2) to the nearest 1/32" (0.8 mm) and calculate surface area. Place in a desiccator for 24 hours. Remove, weigh to the nearest 0.01 grams, and record as "original specimen weight." By means of a thin wire fastened through holes punctured near one edge, suspend the specimen vertically in the center of an oven maintained at 176°F for 2 hours \pm 5 minutes. Remove, cool in a desiccator until room temperature is obtained, weigh, and record as "specimen after-heating weight."

5. CALCULATIONS AND REPORT

5.1 There is no designated CDOT Form used for recording / reporting information for this CP-L.

5.2 Report all bend test results that fail to meet specifications.

5.3 Calculate the average loss of volatile matter as follows:

Volatile matter loss in percent =

$$\frac{\text{orig. specimen wt. minus specimen wt. after heating}}{\text{original specimen weights}}$$

5.4 Calculate the weight per sq ft as follows:

$$\text{Wt/ft}^2 = D \left[\frac{0.317472}{X} \right]$$

Where:

D = original specimen weight as described in Subsection 4.2

X = square inches of sample to the nearest 0.01

5.5 Report any change in appearance of the specimen such as blistering, absorption of the asphalt coatings, or displacement of the coating.