

Standard Method of Test for

# **Method of Determining the Effectiveness of Anti-Stripping Additives in Asphalt Mixtures**

**Designation: SC-T-69 (08-18)**

## **1. SCOPE**

This test method outlines the procedure for evaluating the effectiveness of anti-stripping additives in asphalt hot-mixtures.

## **2. REFERENCE DOCUMENTS**

2.1 None

## **3. APPARATUS**

- 3.1 1000 ml stainless steel beaker and potable water
- 3.2 Stainless steel mesh to fit the bottom of the 1000 ml beaker
- 3.3 Stainless steel rod 8 inches in length
- 3.4 Scales (2 k or larger), +/- 0.1 gram accuracy
- 3.5 Gas Bunsen Burner
- 3.6 Tripod Stand
- 3.7 Metal plate 6" x 6" (1/8" to 1/4" in thickness)
- 3.8 Aluminum foil or lab release paper
- 3.9 Paper towels

## **4. TEST SPECIMENS**

4.1 Asphalt mixture that will be used in the test.

## **5. PROCEDURE**

- 5.1 Obtain a representative sample of the material to be tested. Sample size should be approximately 300 grams.
- 5.2 Transfer the mixture to aluminum foil or lab release paper and allow the sample to cool to room temperature.
- 5.3 Heat a 1000 ml stainless steel beaker, one-half full with water, until it boils. Place a stainless steel mesh approximately 1/2 inch from the bottom of the beaker. Spacers will be required on the bottom of the mesh.
- 5.4 Add the asphalt mixture to the boiling water. Apply heat at a rate that enables the water to re-boil in not less than 2 or more than 3 minutes.
- 5.5 Maintain the water at a medium boil for 10 minutes, stirring with a stainless steel rod 3 times (at intervals of 2.5, 5 and 7.5 minutes) for 60 seconds each time. In addition, during boiling dip a paper towel into the beaker to skim any stripped asphalt binder residue from the surface of the water.

- 5.6 Drain water from the beaker and empty the wet mix onto a paper towel and allow to air dry.
- 5.7 Examine the dried mix carefully to determine if any of the aggregate has lost its coating of asphalt binder. The allowable stripping of asphalt mixes shall not exceed 20% by comparing the test sample to some of the same mixture that was not subjected to the boil test. Uncoated aggregate (coarse or fine) is an indication that the anti-stripping additive is not effective.

## **6. CALCULATIONS**

- 6.1 None

## **7. REPORT**

- 7.1 Record percent visual stripping to the nearest percent.