



Standard Test Procedures Manual

Section: AGGREGATES

Subject: MOISTURE CONTENT OF BITUMINOUS
MIX AGGREGATE

1. SCOPE

1.1. Description of Test

This method describes the procedure for determining the moisture content of bituminous mix aggregate after it has been dried by a mixing plant.

2. APPARATUS AND MATERIALS

2.1. Equipment Required

Container - a litre can with a tight lid of known tare weight.

Balance - balance sensitive to 0.1 g.

Heat source - a gas or electric stove.

Tools - suitable pans, trowel, spatula, etc.

Thermometer - capable of measuring temperatures between 50°C and 150°C.

3. PROCEDURE

3.1. Sample Preparation

Collect a sample of bituminous mix aggregate, in a litre can, from the boot of the second hot elevator of the plant. Place the lid tightly on the can to prevent the sample from losing or absorbing moisture.

In some cases it is not practical to obtain a sample of the bituminous mix aggregate as explained above. In such cases refer to the procedure for moisture content of a bituminous mix STP 204-1. Moisture determinations made using the bituminous mix of the bituminous mix aggregate will yield similar results.

Section:

AGGREGATES

Subject:

MOISTURE CONTENT OF BITUMINOUS
MIX AGGREGATE

3.2. Test Procedure

Weigh litre can and sample to 0.1 g.

Record the weight obtained, less the weight of the can as "weight of wet sample."

Remove the sample from the can, place in a pan, and place on the stove. Heat the sample gradually to 120°C, with constant stirring to prevent local overheating. Close the ventilation damper during the drying process to prevent loss of fines. Continue heating until moisture loss is judged to be complete, then cool the sample and weigh to 0.1 g. Repeat this process until a constant weight is obtained. Record the weight as the "weight of dry sample."

As an alternate drying method, the sample may be placed in an oven at 120°C for 4 hours.

4. RESULTS AND CALCULATIONS

4.1. Calculations

Record the "weight of wet sample" minus the "weight of dry sample" as "weight of water."

Calculate the moisture content using the following formula:

$$\text{Percent Moisture} = \frac{\text{weight of water}}{\text{weight of dry sample}} \times 100$$

4.2. Reporting Results

Enter test data on Form No. MR-70 which is arranged for detailed calculations.

Report percent moisture on Form No. MR-70.

Standard Test Procedures Manual

STP 206-6

Section:
AGGREGATES

Subject:
MOISTURE CONTENT OF BITUMINOUS
MIX AGGREGATE

APPROVAL SHEET

New ___ Revision X Date of Previous Document 82-04-01

Effective Date: - -

Description of Revision (Reason for Revision):

Format of test procedure updated

Review/Implementation Process:

Reviewed by the Materials Section of the Technical Standards and Policies
Branch.

Other Manuals/Policies Affected:

Nil

Follow Up/Training Required:

Nil

Comments/Concerns/Implications (Budget/Environment/Stakeholders):

Prepared and Recommended by D. MacLeod
Materials Standards Engineer

93-12-08
Date

Approval Recommended by R.A. Widger
Senior Materials Engineer Date

 - -

Approval Recommended by A.R. Gerbrandt
Dir., Technical Standards & Policies Br.

 - -
Date

Approved by D.G. Metz
Assistant Deputy Minister, Infrastructure

 - -
Date

Electronic File Updated

 - -

Update Mailed

 - -