
HDOT TM 3-00

Standard Test Method for Field Determination of Moisture Content of Soils

1. Scope

1.1 This test method covers the rapid field determination of moisture content of soils, base courses and in general all backfill material by the use of a portable heating system.

2. Definition

2.1 The water or moisture content (mc) of a soil is the ratio, expressed as a percentage, of the mass of water (loss of moisture) in a given mass of soil to the mass of the solid (oven dried) particles.

2.2 The term soil as used in this test method refers to clays as well as crushed aggregates which are used in embankments and pavement base courses.

CAUTION - For soils containing organic matter, the standard laboratory method of oven drying should be used. If in doubt, correlation tests between this method and the standard laboratory method AASHTO T265 should be performed.

3. Apparatus

3.1 Balances

3.1.1 Any balance or scale having a minimum capacity of 300 g readable to 0.01 g.

3.2 Drying Equipment

3.2.1 Any portable stove, oven or other suitable apparatus that will produce and maintain the desired temperature of 135° to 150° C (275° to 300° F) in the heating chamber throughout the length of the test.

3.2.2 The drying equipment shall be able to maintain and distribute the heat evenly throughout the heating chamber. The heating chamber shall be able to accommodate a thermometer.

3.3 Sample Containers - Suitable containers made of material resistant to corrosion and not subject to appreciable change in mass or disintegration on repeated heating and cooling. (The containers shall be provided with close fitting lids to prevent loss of moisture from samples that are not weighed within two (2) minutes from the time of sampling).

