

ALDOT-385 DETERMINING ABSORPTION OF GRAVEL

1. Scope

- 1.1. This procedure modifies AASHTO T-85 to simulate long term absorption of gravel.

2. Applicable Documents

- 2.1. Alabama Department of Transportation Standard Specifications for Highway Construction, Section 801.
- 2.2. AASHTO T-85, Specific Gravity and Absorption of Coarse Aggregate.
- 2.3. AASHTO T-209, Maximum Specific Gravity of Bituminous Paving Mixtures.

3. Apparatus

- 3.1. All of the equipment listed in AASHTO T-85 is used. In addition, the following equipment from AASHTO T-209 is needed.
- 3.2. Container--The container may be either a glass or metal bowl, or a volumetric flask having a capacity of at least one liter. Containers shall be sufficiently strong to withstand a hard vacuum and shall have an airtight cover fitted with a hose connection to apply and measure the vacuum.
- 3.3. Vacuum Pump or Aspirator--A device capable of producing a vacuum of 30 mm Hg or less, measured in absolute pressure, is needed to remove the entrapped air from the gravel.
- 3.4. Hose and Manometer--This is needed to connect the container and the vacuum pump, and to insure that enough vacuum is applied.

4. Test Procedures

- 4.1. This test shall be run according to AASHTO T-85 with this addition to section 8.1 of AASHTO T-85.
 - 4.1.1. Immediately prior to immersing the aggregate in water at room temperature for 15 to 19 hours perform the following. Place the gravel sample into the container and cover the sample with water at approximately room temperature. Remove entrapped air by subjecting the contents to a vacuum of 30 mm Hg or less absolute pressure for 13 to 17 minutes. Agitate the container and contents either continuously by mechanical device or manually by vigorous shaking at intervals of about two minutes. This is from sections 6.2 and 6.3 of AASHTO T-209. Minimize the gravel's exposure to air as the procedure continues according to AASHTO T-85, section 8.1.