
Standard Method of Test for

**Density of In-Place Asphalt
Pavement by Electronic Surface
Contact Devices**

AASHTO Designation: T 343-12 (2024)¹

Adopted: 2012

Reviewed but Not Updated: 2024

Editorially Revised: 2021

Technical Subcommittee: 2c, Asphalt–Aggregate Mixtures



**American Association of State Highway and Transportation Officials
555 12th Street NW, Suite 1000
Washington, D.C. 20004**

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1. SCOPE

- 1.1. This method covers the in-place determination of the total density and relative compaction of HMA pavements by measuring changes in the electromagnetic field resulting from the compaction process.
- 1.2. The equipment referenced in this method is an electronic surface contact device that is relatively unaffected by the surface moisture and surface variances in temperatures typically encountered during HMA paving operations. If needed, it should include circuitry to measure/compensate for moisture and temperature variances during the material compaction process.
- 1.3. *This procedure does not purport to address all of the safety concerns associated with its use. It is the responsibility of the user of this procedure to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*
- 1.4. *The quality of the results produced by this standard is dependent on the competence of the personnel performing the procedure and the capability, calibration, and maintenance of the equipment used. Agencies that meet the criteria of R 18 are generally considered capable of competent and objective testing/sampling/inspection/etc. Users of this standard are cautioned that compliance with R 18 alone does not completely assure reliable results. Reliable results depend on many factors; following the suggestions of R 18 or some similar acceptable guideline provides a means of evaluating and controlling some of those factors.*

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
 - R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
 - T 166, Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens

3. SIGNIFICANCE

- 3.1. The test method described is useful as a rapid nondestructive technique for determining the in-place density and relative compaction of compacted HMA mixtures.

