



Designation: D8078 – 18

# Standard Test Method for Ash Content of Asphalt and Emulsified Asphalt Residues<sup>1</sup>

This standard is issued under the fixed designation D8078; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This test method measures the ash content of an asphalt or emulsified asphalt residue.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 The text of this standard references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

**D3666** Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials

**D6934** Test Method for Residue by Evaporation of Emulsified Asphalt

**D6997** Test Method for Distillation of Emulsified Asphalt

**D7497** Practice for Recovering Residue from Emulsified Asphalt Using Low Temperature Evaporative Technique

**E691** Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.47 on Miscellaneous Asphalt Tests.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

2.2 *AASHTO Standard:*<sup>3</sup>

**AASHTO R78** Recovering Residue from Emulsified Asphalt using Low-Temperature Evaporative Techniques

## 3. Summary of Test Method

3.1 A known amount of asphalt or emulsified asphalt residue is put into a crucible, which is then placed into a muffle furnace for a period of time to incinerate any organic materials present and allow gravimetric calculation of the ash content of the specimen.

## 4. Significance and Use

4.1 This test is used for determining the amount of inorganic or non-organic materials in an asphalt or emulsified asphalt residue. The emulsified asphalt residue can be obtained by methods such as Test Methods **D6934** and **D6997**, Practice **D7497**, AASHTO R78, or other agency-specified methods. This test may be useful as an alternative to solubility tests when a confounding material creates an interference to the solubility test being performed acceptably. An example of an interfering material is a polymer which may be incompatible with the solubility test solvent and plug the filter.

NOTE 1—The quality of the results produced by this standard are 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 Specification **D3666** are generally considered capable of competent and objective testing, sampling, inspection, etc. Users of this standard are cautioned that compliance with Specification **D3666** alone does not completely ensure reliable results. Reliable results depend on many factors; following the suggestions of Specification **D3666** or some similar acceptable guideline provides a means of evaluating and controlling some of those factors.

## 5. Apparatus

5.1 *Crucible*—Porcelain or quartz-fiber, of sufficient size (normally 30 to 100-cm<sup>3</sup> capacity) and suitability for muffle furnace, may be used.

5.2 *Crucible Tongs*—Sufficient size to transfer the crucible to and from the muffle furnace safely.

5.3 *Balance*, capable of weighing a minimum of 200 g to within 0.001 g.

<sup>3</sup> Available from American Association of State Highway and Transportation Officials (AASHTO), 444 N. Capitol St., NW, Suite 249, Washington, DC 20001, <http://www.transportation.org>.