



Designation: D8418 – 21

Standard Guide for Material and Construction Standards Related to Sustainability Within Committee D04¹

This standard is issued under the fixed designation D8418; 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 (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide is intended to be a reference for locating specific test methods relating to materials and construction standards within the jurisdiction of Committee D04 on Road and Paving Materials that could be a strategy used to meet project sustainability goals.

1.2 The guide needs to be reviewed and updated by Subcommittee D04.99 on Sustainable Asphalt Pavement Materials and Construction, on an as-needed basis, to remain viable.

1.2.1 Additions or deletions to the reference list in Section 2 shall be submitted to Subcommittee D04.99 and balloted.

1.3 *Units*—The values stated in SI units are to be regarded as standard. No other units of measurement are included in this 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:*²

D8 Terminology Relating to Materials for Roads and Pavements

D692/D692M Specification for Coarse Aggregate for Asphalt Paving Mixtures

D1073 Specification for Fine Aggregate for Asphalt Paving Mixtures

D1752 Specification for Preformed Sponge Rubber, Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

D2940/D2940M Specification for Graded Aggregate Material for Bases or Subbases for Highways or Airports

D4215 Specification for Cold-Mixed, Cold-Laid Asphalt Paving Mixtures

D4552/D4552M Classification for Hot-Mix Recycling Agents

D4792/D4792M Test Method for Potential Expansion of Aggregates from Hydration Reactions

D5106 Specification for Steel Slag Aggregates for Bituminous Paving Mixtures

D6114/D6114M Specification for Asphalt-Rubber Binder

D6155 Specification for Nontraditional Coarse Aggregates for Asphalt Paving Mixtures

D6932/D6932M Guide for Materials and Construction of Open-Graded Friction Course Plant Asphalt Mixtures

D7064/D7064M Practice for Open-Graded Friction Course (OGFC) Asphalt Mixture Design

D7564/D7564M Practice for Construction of Asphalt-Rubber Cape Seal

D7741/D7741M Test Method for Measurement of Apparent Viscosity of Asphalt-Rubber or Other Asphalt Binders by Using a Rotational Handheld Viscometer

D8021 Guide for Blast Furnace and Steel Furnace Slag as Produced During the Manufacture of Iron and Steel

D8055 Guide for Selecting an Appropriate Electronic Thermometer for Replacing Mercury Thermometers in D04 Road and Paving Standards

D8125 Specification for Re-Refined Engine Oil Bottoms (REOB)/Vacuum Tower Asphalt Extender (VTAE)

D8140 Guide for the Use of Foundry Sand in Asphalt Mixtures

D8378 Test Method for Potential Expansion of Steel Slag from Hydration Reactions by Autoclave

¹ This guide is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.99 on Sustainable Asphalt Pavement Materials and Construction.

Current edition approved Nov. 1, 2021. Published November 2021. DOI: 10.1520/D8418-21.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

3. Terminology

3.1 *Definitions*—For the definitions of terms used in this standard refer to Terminology **D8**.

4. Summary of Guide

4.1 This guide is intended to be a reference for locating specific test methods relating to materials and construction standards within the jurisdiction of Committee D04 on Road and Paving Materials that could be a strategy used to meet project sustainability goals.

4.2 These standards could include asphalt materials that utilize recycled materials and industrial by-products, such as reclaimed asphalt pavement (RAP), roofing shingles, and ground tire rubber. Standards could also include asphalt construction techniques that improve the environment through techniques that provide noise reduction, provide for the handling of storm water run-off through the pavement structure, allow lower paving temperatures for hot mix asphalt (HMA), or any other sustainable practices related to asphalt paving.

5. Significance and Use

5.1 This guide provides a list of the standards within Committee D04 that address the use of materials,

specifications, and construction practices that could have broader sustainability benefits. This list is current, relative to the approval date of the standard.

5.2 The standards discussed are listed in the Referenced Documents section.

5.3 This guide is intended to be used as a reference for an owner, engineer, contractor, or combinations thereof, to identify potential sustainability strategies and the respective material and construction standards and specifications. It is important to note that these standards do not ensure sustainability goals are achieved; rather, they may be useful in determining inputs for sustainability metrics.

6. Keywords

6.1 construction; materials; sustainable; sustainable strategies

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