



Standard Specification for A Size 10 × 4–5 Smooth-Tread Friction Test Tire¹

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1. Scope

1.1 This specification covers the general requirements for a smooth-tread standard tire for measuring tire-pavement friction forces.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are provided for information purposes only.

1.3 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

D297 Test Methods for Rubber Products—Chemical Analysis

D412 Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension

D1054 Test Method for Rubber Property—Resilience Using a Goodyear-Healey Rebound Pendulum (Withdrawn 2010)³

D1765 Classification System for Carbon Blacks Used in Rubber Products

D2240 Test Method for Rubber Property—Durometer Hardness

D3182 Practice for Rubber—Materials, Equipment, and Procedures for Mixing Standard Compounds and Preparing Standard Vulcanized Sheets

E867 Terminology Relating to Vehicle-Pavement Systems

¹ This specification is under the jurisdiction of ASTM Committee E17 on Vehicle - Pavement Systems and is the direct responsibility of Subcommittee E17.24 on Tire and Slider Characteristics.

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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 The last approved version of this historical standard is referenced on www.astm.org.

2.2 Other Document:

Griptester—GTSV1 Descriptive Booklet⁴

3. Terminology

3.1 Terminology used in this specification is in accordance with Terminology E867.

4. Materials and Manufacture

4.1 The individual standard tires shall conform to the design standards of Section 6. Dimensions, weights, and permissible variations are also given in Section 6 and Fig. 1 and Fig. 2.

4.2 Tread compounding, fabric processing, and all tire manufacturing shall be certified to ensure that the specifications are met (see Section 8).

4.3 The markings on the tire, as shown in Fig. 1, shall be molded on the sides of the tire.

4.4 Fig. 1 shows a view of the tread surface and a side view of the tire. Fig. 2 is a typical tire cross-section with critical dimensions identified.

4.5 Tire should be mounted so that it is rotated in the direction of the arrow on the side of the tire. See Fig. 1.

5. Material Requirements

5.1 The compounding requirements for the tread compound are given in Table 1.

5.2 The fabric shall be Nylon, 1260/2 Denier.

NOTE 1—Certain proprietary products have been specified since exact duplication of properties of the finished tire may not be achieved with other similar products. This inclusion does not in any way comprise a recommendation for these proprietary products nor against similar products of other manufacturers, nor does it imply any superiority over any such similar products.

6. Physical Requirements

6.1 The physical and mechanical test requirements of the tread compound are given in Table 2.

7. Construction, Dimensions and Permissible Variations

7.1 *Construction*—The tire shall be size 10 × 4–5, tube type, two plies, nylon cord, and bias construction.

⁴ Available from Findlay-Irvine Ltd., Bog Road, Penicuik, Midlothian EH269BU, Scotland.