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Standard Terminology Relating to Tire Cord and Fabrics¹

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1. Scope

1.1 This terminology is the compilation of all definitions developed by Subcommittee D13.19 on Tire Cords and Fabrics.

1.2 The terminology, mostly definitions, is unique to the tire cord fabric industry. Meanings of the same terms used outside the tire cord fabric industry can be found in other compilations or in dictionaries of general usage.

1.3 In addition to being a specialized dictionary, this terminology is also a tool for managing the Subcommittee's terminology. This includes finding, eliminating, and preventing redundancies, that is, where two or more terms relating to the same concept are defined in different words.

2. Referenced Documents

2.1 ASTM Standards:

- D 123 Terminology Relating to Textiles²
- D 885 Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Manufactured Organic-Base Fibers²
- D 1871 Test Methods for Adhesion of Single-Filament Steel Wire to Rubber²
- D 2229 Test Method for Adhesion Between Steel Tire Cords and Rubber²
- D 2692 Test Method for Air Wicking of Tire Fabrics, Tire Cord Fabrics, Tire Cord, and Yarns²
- D 2969 Test Methods for Steel Tire Cords²
- D 2970 Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Yarns Made from Glass Filaments²
- D 4393 Test Method for Strap Peel Adhesion of Reinforcing Cords or Fabrics to Rubber Compounds³
- D 4776 Test Method for Adhesion of Tire Cords and Other Reinforcing Cords to Rubber Compounds by H-Test Procedure³
- D 4974 Test Method for Hot Air Thermal Shrinkage of Yarn and Cord Using a Thermal Shrinkage Oven³
- D 4975 Test Methods for Single-Filament Tire Bead Wire Made from Steel³

¹ This terminology is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.19 on Tire Cord and Fabrics.

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² Annual Book of ASTM Standards, Vol 07.01.

³ Annual Book of ASTM Standards, Vol 07.02.

D 5591 Test Method for Thermal Shrinkage Force of Yarn and Cord with the Testrite Thermal Shrinkage Force Tester³

D 6320 Test Methods for Single Filament Hose Reinforcing Wire Made from Steel³

3. Terminology

adhesion, *n*—the property denoting the ability of a material to resist delamination or separation into two or more layers.

D 1871, D 4393, D 4776

adhesion, *n*—*in tire fabrics*, the force required to separate a textile material from rubber or other elastomer by a definite prescribed method.

D 2229, D 4393, D 4776

adhesive treated tire cord, *n*—a tire cord whose adhesion to rubber or other elastomer has been improved by the application of a dip followed by rapid drying and (normally) additional heat treatment.

D 5591

air wicking, *n*—*in tires*, the passage of air longitudinally along or through yarns in a fabric that has been encased and cured in rubber or other elastomer, that is, air permeability in the plane of the fabric.

D 2692

catenary length, *n*—the difference between the length of the shortest and the longest component in a plied yarn or cables cord after twisting.

D 2970

chafer fabric, *n*—woven fabric, usually coated with unvulcanized rubber, which is laid around the bead of a tire before vulcanization.

D 2692, D 4393

cord, *n*—a twisted or formed structure composed of one or more single or plied filaments, strands, or yarns of organic polymer or inorganic materials.

D 885, D 4776, D 5591

cord twist, *n*—the amount of twist in a cord made from two or more single or plied yarns.

D 885, D 2970

core, *n*—a filament or strand that serves as an extended axis about which other elements can be wound.

D 2969

curing, *n*—see the preferred term **vulcanization**.

D 1871,

D 4393, D 4776

dip, *n*—a chemical composition that is applied to a textile cord or fabric to improve its adhesion to rubber or other elastomer.

D 885, D 2970

dip pick-up, *n*—*in glass cords*, the amount of dip solids present as supplied.

D 2970

dip pick-up, *n*—*in a textile cord or fabric*, the amount of dip or dip components present after processing, including drying, as determined by prescribed methods, and expressed as