



Designation: D 5793 – 95

## Standard Test Method for Binding Sites Per Unit Length or Width of Pile Yarn Floor Coverings<sup>1</sup>

This standard is issued under the fixed designation D 5793; 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 reappraisal. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

### 1. Scope

1.1 This test method describes the measurement of the number of binding sites per unit length or width of machine-made, woven, knitted and tufted pile yarn covering both before and after adhesive backing application.

1.2 The values stated in SI units are to be regarded as the standard for all measurements. The inch-pound values are provided for information purposes only.

1.3 Determination of the number of binding sites per unit length or width of pile yarn floor covering previously was contained within Test Methods D 418. For user convenience Subcommittee D13.21 has subdivided Test Methods D 418 into separate standards, of which this test method is one.

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

### 2. Referenced Documents

#### 2.1 ASTM Standards:

D 123 Terminology Relating to Textiles<sup>2</sup>

D 418 Methods of Testing Pile Yarn Floor Covering Construction<sup>2</sup>

D 1909 Table of Commercial Moisture Regains for Textile Fibers<sup>2</sup>

D 5684 Terminology Relating to Pile Yarn Floor Coverings<sup>2</sup>

E 122 Practice for Choice of Sample Size to Estimate the Average Quality of a Lot Process<sup>3</sup>

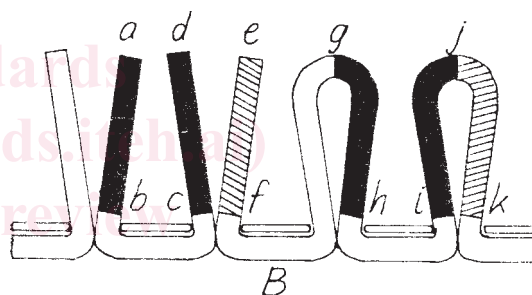
### 3. Terminology

#### 3.1 Definitions:

3.1.1 *binding site, n*—for pile yarn floor covering, a location at which the pile yarn is, or can be, bound to the backing fabric.

3.1.1.1 *Discussion*—In any machine-made pile yarn floor covering, the binding sites occur in an orderly and repetitive

array at uniform intervals in both lengthwise and widthwise directions of the floor covering. Among woven, knitted and tufted floor coverings, binding sites differ. For example, the binding site of a woven floor covering consists of one or more filling shots under which the face yarn passes, while the binding site of a tufted floor covering consists of the section of backing fabric between two adjacent needle holes in the lengthwise direction. The number of pile yarn strands that can be fastened at one binding site can vary from one to several, according to design.



ad = cutpile tuft element  
gj = loop pile tuft element  
ab, cd, ef, gh, ij, jk = tuft legs  
cd, ef = cut pile tuft leg pair  
ij, jk = loop pile tuft leg pair, a loop  
B = one binding site

FIG. 1 Cross Section of Tufted Pile Yarn Floor Covering

3.1.2 *components, n*—for pile yarn floor covering, the individual yarn or fabric elements into which a pile yarn floor covering can be dissected.

3.1.2.1 *Discussion*—The major components of uncoated pile yarn covering are the pile yarn and the backing fabric. For woven and knitted floor covering, the backing fabric may be further dissected into component yarns.

3.1.3 *tuft, n*—in pile fabrics, those cut or uncut loops which form part of the fabric face that are attached to the backing fabric at binding sites.

3.1.3.1 *Discussion*—A tuft may consist of one or more tuft elements.

3.2 For definitions of other terms related to pile floor coverings, refer to Terminology D 5684. For the definition of other textile terms used in this test method, refer to Terminology D 123.

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D-13 on Textiles and is the direct responsibility of Subcommittee D13.21 on Pile Yarn Floor Coverings.

<sup>2</sup> Annual Book of ASTM Standards, Vol 07.01.

<sup>3</sup> Annual Book of ASTM Standards, Vol 14.02.