



Standard Tables of Conversion Factors and Equivalent Yarn Numbers Measured in Various Numbering Systems¹

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1. Scope

1.1 These tables include (1) a series of conversion factors required to convert the number of a yarn measured in a specific system to the equivalent number measured in various other systems (see [Table 1](#)), and (2) specific equivalent numbers for yarns measured in various systems (see [Table 2](#)).

1.2 The content is basically consistent with recommendations of the International Organization for Standardization (ISO) Standard 2947.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered 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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

[D123 Terminology Relating to Textiles](#)

[D4849 Terminology Related to Yarns and Fibers](#)

[SI10 Standard for Use of the International System of Units \(SI\): The Modern Metric System](#)³

¹ These tables are under the jurisdiction of ASTM Committee [D13](#) on Textiles and are the direct responsibility of Subcommittee [D13.58](#) on Yarns and Fibers.

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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 Excerpts from SI 10, Standard for Use of the International System of Units (SI): The Modern Metric System [SI10](#), can be found in the *Annual Book of ASTM Standards*, Vols 07.01 and 07.02. The standard is available as a separate publication and appears in its entirety in Vol 14.02.

2.2 ISO Standard:

[Standard 2947 Textiles—Integrated Conversion Table for Replacing Traditional Yarn Numbers by Rounded Numbers in the Tex System](#)⁴

2.3 NIST Standard:

[NIST Circular M121, January 1936](#)⁵

3. Terminology

3.1 Refer to Terminology [D4849](#) for definition of the following terms used in this standard: American graincount; cotton count; cut, *in asbestos and glass yarns*, cut, *in wool yarns*; denier; direct yarn numbering systems; grain, *in yarn spinning*; grain, *in measuring mass*; indirect yarn numbering system; linear density; lea, *in linen yarns*; metric count; run, *in the american woollen system*; tex; worsted count; yarn number; and yarn numbering system.

3.2 Refer to Terminology [D123](#) for definitions of other terms used in this standard.

4. Conversion Factors for Equivalent Yarn Numbers

4.1 Calculate any equivalent value using the appropriate factor listed in [Table 1](#).

5. Use of Previously Calculated Equivalent Yarn Numbers

5.1 For a specific number in a stated system, read the equivalent in the various other systems from [Table 2](#).

5.2 With a few exceptions, fractional traditional indirect counts have been omitted from [Table 2](#); the rounded tex system values for most fractional traditional indirect counts can be obtained by interpolation.

6. Implementation of the Tex Yarn Numbering System

6.1 In [Table 2](#), to encourage the implementation of the tex system in the United States, rounded tex values were chosen to

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

⁵ Available from National Institute of Standards and Technology (NIST), 100 Bureau Dr., Stop 1070, Gaithersburg, MD 20899-1070, <http://www.nist.gov>.