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Standard Terminology Relating to Flax and Linen¹

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^{ε1} NOTE—The term “average fiber width” was added editorially in September 2014.

1. Scope

1.1 This terminology covers definitions of technical terms related to flax and linen.

2. Referenced Documents

2.1 *ASTM Standards*:²

D123 Terminology Relating to Textiles

D7879 Test Method for Determining Flax Fiber Widths
Using Image Analysis

3. Terminology

3.1 *Definitions*:

average fiber width (μm), *n*—the arithmetic mean width of a selected group of fibers in a two-dimensional image plane.

DISCUSSION—The selected group of fibers is dependent upon the capturing device and software parameters as set by the operator. **D7879**

bast fibers, *n*—*in flax stems*, fibers found in the layer of phloem of the flax stem between the inner xylem tissue and the epidermis tissue.

breaking, *v*—*in flax stems*, the crushing of the structure of the stem; loosening the bond between the fiber bundles and shives and breaking the shives into short pieces to facilitate its removal.

combing, *v*—*in flax*, the processing of tow so as to produce tops or silver which have the staple length and width suitable for use in the worsted spinning system.

cottonizing, *v*—*in flax*, the processing of flax fiber so as to make it suitable for use in the cotton spinning system.

decorticating, *v*—*in flax*, the process of mechanically separating fiber bundles from straw.

de-seeding, *v*—*in flax*, the process of removing seeds and seed-holding structures from plants.

fiber bundle, *n*—*in flax*, group of ultimate fibers which are held together in the flax stem by pectins, lignins or any combination thereof.

flax, *n*—the generic name for plants that are botanically classified as *Linum usitatissimum*, which are cultivated for seed and/or fiber.

hackling, *v*—*in flax*, the process of cleaning and aligning long-line fibers to improve fineness and remove non-fibrous materials and short fibers.

linen, *n*—a yarn or fabric made solely from flax fibers.

linen blend, *n*—a yarn or fabric made from a combination of flax and other fibers.

long line, *n*—*in flax*, flax fiber bundles that have a minimum length of 50 cm.

over-retting, *v*—*in flax*, indicates that decomposition has caused excessive deterioration of bast fibers. (See retting and underretting)

retting, *v*—*in flax*, the process of partial biological or chemical decomposition of pectins and other components which bind the fiber, fiber bundles, and the non-fiber structures, thereby facilitating removal of bast fibers from stems. (See underretting and over-retting)

scutching, *v*—the mechanical beating and scraping of flax straw subsequent to breaking to separate the shives and tow from the long line flax fiber.

shives, *n*—the woody parts of the flax plant which are not fibers.

straw, *n*—*in flax*, refers to dried stems and plant parts such as roots, leaves, and seed holding structures.

tow, *n*—*in flax fibers*, a combination of fiber bundles and ultimate fibers that have a maximum length of 50 cm.

DISCUSSION—Tow can be made during any stage of processing. For example, breaker, scutched and hackled tow are respectively created subsequent to breaking, scutching and hackling.

¹ This terminology is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.17 on Flax and Linen.

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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.