



Standard Terminology Relating to Flax and Linen¹

This standard is issued under the fixed designation D6798; 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 reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

¹ NOTE—The term “average fiber width” was added editorially in September 2014.

² NOTE—The terms “dew retting,” “enzyme retting,” and “water retting” were added editorially in September 2015.

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

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

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.

Current edition approved July 1, 2013. Published September 2013. Originally approved in 2002. Last previous edition approved in 2007 as D6798 – 02(2007)^{ε1}. DOI: 10.1520/D6798-02R13E02.

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.

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

dew retting, *n*—*in flax*, the process of pulling or cutting flax straw and leaving on the soil for a period of time to allow partial degradation of straw to effect retting.

enzyme retting, *n*—*in flax*, the process of mechanically adding enzyme formulations under precise conditions to pulled or cut flax straw for a period of time to effect retting.

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

retting, *n*—*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, *n*—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.

trash, *n—in flax fiber*, any non-fibrous material.

ultimate fiber, *n— in flax*, an individual bast fiber.

under-retting, *n— in flax*, indicates that decomposition is insufficient to allow fiber bundles to be easily removed from the non-fibrous parts of the stem. (See retting and over-retting)

water retting, *n—in flax*, the process of immersing flax straw for a period of time in water to effect retting.

3.2 *Other Definitions*—For the definitions of other textile terms used in this standard, refer to Terminology **D123**.

4. Keywords

4.1 definitions; flax; linen; terminology

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