



## Designation: ~~D3990 – 12~~<sup>ε1</sup> D3990 – 12 (Reapproved 2016)

# Standard Terminology Relating to Fabric Defects<sup>1</sup>

This standard is issued under the fixed designation D3990; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the U.S. Department of Defense.*

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<sup>ε1</sup> NOTE—Terms from Test Method ~~D7811~~ were added editorially in August 2013.

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## 1. Scope

1.1 This terminology covers defects in both woven and knit fabrics. Descriptions of the defects, illustrations, and related material are given under the most frequently used terms; synonym(s) are listed in parentheses and cross referenced.

## 2. Referenced Documents

2.1 *ASTM Standards:*

[D1776 Practice for Conditioning and Testing Textiles](#)

~~[D7811 Test Method For Bow and Skew using a Measuring Tool](#)~~

## 3. Terminology

3.1 *Definitions:*

**abrasion mark, *n***—an area damaged by friction. (*Syn.* chafe mark)

*apron mark*—See **decating mark**.

*baggy cloth*—See **wavy cloth**.

*baggy selvage*—See **slack selvage**.

*balling up*—See **fuzz ball**.

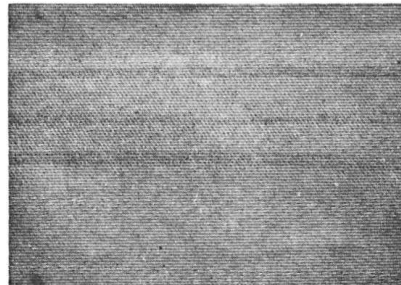
**barré, *n***—an unintentional, repetitive visual pattern of continuous bars and stripes usually parallel to the filling of woven fabric or to the courses of circular knit fabric. (Compare **warp streak, mixed filling**)

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<sup>1</sup> This terminology is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.59 on Fabric Test Methods, General. Current edition approved July 1, 2012/July 1, 2016. Published August 2012/July 2016. Originally approved as an appendix to Terminology D123 in 1964. Redesignated D3990 in 1981. Last previous edition approved in 2012 as ~~D3990 – 12~~; D3990 – 12<sup>ε1</sup>. DOI: ~~10.1520/D3990-12E01~~; 10.1520/D3990-12R16.

### DISCUSSION—

The term “barré” is sometimes used as a synonym for “warp streaks” in warp knit and woven fabrics. Barré can be caused by physical, optical, or dye differences in the yarns, geometric differences in the fabric structure, or by any combination of these differences.



Barré

*beaded selvage*—See **loopy selvage**.

*bias*—See **skew**.

**birdseye**, *n*—*in knitted fabrics*, an unintentional tuck stitch.

*blanket mark*—See **sanforizing mark**.

**blotch**, *n*—an offcolored area of any shape caused by grease or oil. (*Syn.* **oil spot**)

**bow**, *n*—a fabric condition resulting when filling yarns or knitting courses are displaced from a line perpendicular to the selvages and form one or more arcs across the width of fabric. (See also **double bow**)

*bow, double*—See **double bow**.

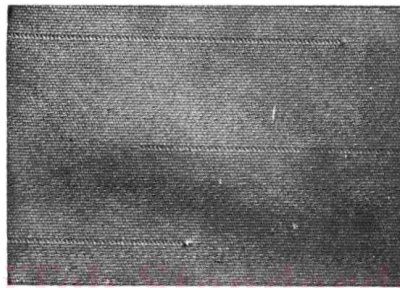
*box mark*—See **shuttle mark**.

*break-out*—See **smash**.

**broken end**, *n*—*in woven fabrics*, a void in the warp direction due to yarn breakage.

**broken filament**, *n*—*in multifilament yarn*, breaks in one or more filaments. (*Syn.* strip back, skin back)

**broken pick**, *n*— *in woven fabrics*, a discontinuity in the filling direction caused by a break or cut in the filling yarn.



Broken Pick

*broken selvage*—See **cut selvage**.

**bruise**, *n*—*in fabrics*, an area that has been subjected to impact or pressure, that differs from the adjacent normal fabric. (*Syn.* **pressure mark**.)

*bunch*—See **slug**.

*chafe mark*—See **abrasion mark**.

**clip mark**, *n*—a visual deformation near the edge of a fabric parallel with the lengthwise direction caused by pressure exerted by a clasping device on a clip tenter frame. (See also *pin mark*.)

**coarse end**, *n*—a larger than normal diameter warp end. (*Syn.* heavy end) (Compare **fine end**)  
coarse filling—See **coarse pick**.

**coarse pick**, *n*— *in woven fabrics*, one or more picks of larger diameter than the normal filling yarn in the fabric. (*Syn.* thick filling)

**cockles**, *n*—*in yarns*, irregular thick, uneven, lumps.

**color bleeding**, *n*—the loss of color from a dyed fabric when immersed in water, dry-cleaning solvent, or similar liquid medium, with consequent coloring of the liquid medium. (Compare **color staining**.)

**color staining**, *n*—the undesired pickup of color by a fabric: (1) when immersed in water, dry-cleaning solvent, or similar liquid medium, that contains dyestuffs or coloring material not intended for coloring the fabric, or (2) by direct contact with other dyed material from which color is transferred by bleeding or sublimation. (Compare **crocking**, **color bleeding**)

*corded selvage*—See **loopy selvage**.

**crack mark**, *n*—an open place causing a streak of variable length approximately parallel to the length or width. (*Syn.* open place, thin spot)



Crack Marks

**crease**, *n*—a fabric defect evidenced by a break, line, or mark generally caused by a sharp fold. (*Syn.* mill wrinkle)

**crease mark**, *n*—a visible deformation left in a fabric after a crease has been incompletely removed during fabric processing.

**crocking**, *n*—a transfer of color from the surface of a colored fabric to an adjacent area of the same fabric or to another surface principally by rubbing action. (Compare **color staining**)



Crease

**crowsfeet**, *n*—*in fabrics*, fine wrinkles of varying degrees of intensity, size, and shape.

DISCUSSION—

Crowsfeet may occur during wet processing and on finished goods after folding.

**curl**—See **kink**.

**curled selvage**, *n*—self-descriptive. (*Syn.* rolled selvage, turned-over edge)

**cut pick**—See **broken pick**.

**cut selvage**, *n*—cuts or breaks that occur in the selvage only. (*Syn.* broken selvage, damaged selvage)

**damaged selvage**—See **cut selvage**.

**dead cotton**, *n*—a small nep of cotton fibers which is gathered on the surface of the fabric and which is different in color from the surrounding fabric.

**decating mark**, *n*—a crease mark or impression extending across the cloth near the beginning or end of a piece due to the thickness of the fabric leader seam. (*Syn.* apron mark, leader mark)

**doctor streak**, *n*—*in printed cloth*, a wavy white or colored streak in the warp direction of printed cloth caused by a defective doctor blade.

**double bow**, *n*—two fabric bows, arcing in the same direction, as in a flattened *M* or *W* depending on the viewing angle. (See also **bow**) (Compare **double reverse bow**)

DISCUSSION—

In tubular knits, there may be differential bowing between the top and bottom of the tube.

**double hooked bow**, *n*—one hooked bow at each side of the fabric that arc in opposite directions. (See also **hooked bow**)

**double pick**, *n*—*in woven fabrics*, two picks wrongly placed in the same shed. (See also **mispick**) (Compare **jerk-in**)

**double reverse bow**, *n*—two fabric bows arcing in opposite directions. (See also **bow** and **double hooked bow**) (Compare **double bow**)

**draw-back**, *n*—a weave distortion characterized by tight and slack places in the same warp yarn. (*Syn.* hitch-back)

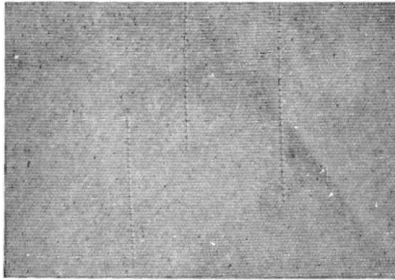
**dropped stitch**, *n*—*in knitted fabrics*, an unknitted stitch.

*dye spot*—See **dyestain**.

**dyestain**, *n*—an area of unintended discoloration due to uneven absorption of a colorant.

**dye streak**, *n*—an unintended irregular stripe in a fabric due to uneven absorption of a colorant.

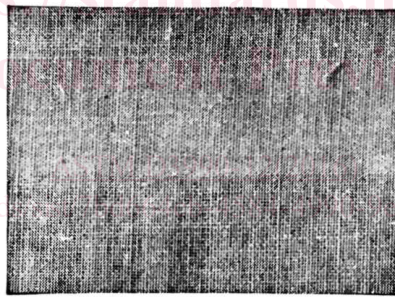
**end out**, *n*—a void caused by a missing warp yarn. (*Syn.* missing end)



End Out

**filling band**, *n*— *in woven fabrics*, a visual defect across the width due to a change occurring in the yarn for a large number of picks. (Compare **filling bar**)

**filling bar**, *n*— *in woven fabrics*, a visual defect across the width which contains a limited number of picks of different appearance than normal. (Compare **filling band**)



Filling Bar

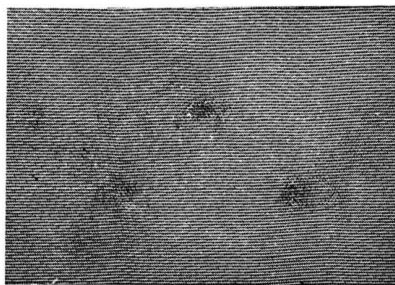
*filling run-out*—See **broken pick**.

**fine end**, *n*.—a smaller than normal diameter warp end. (*Syn.* light end, thin end) (Compare **coarse end**)

*fine filling*—See **thin filling**.

*fine pick*—See **thin filling**.

**finger mark**, *n*—an irregular spot showing variation in picks per inch for a limited width.

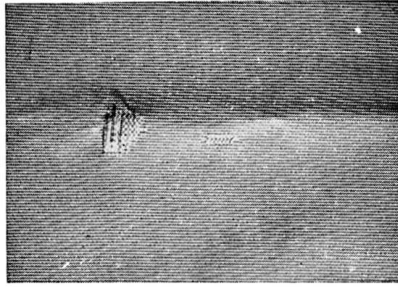


Finger Mark

**finishing bar**, *n*—an uneven appearance across the entire fabric width.



**float**, *n*—*in woven fabrics*, that portion of a warp or filling yarn that extends unbound over two or more warp or filling yarns; *in knitted fabrics*, that portion of a yarn that is not knitted into loops.



Float

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DISCUSSION—

If intentionally introduced, floats are a constructional characteristic of knit or woven fabrics. If unintentionally present, they are considered to be defects.

*flyer*—See **loom fly**.

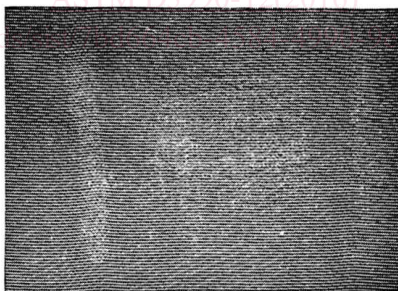
**frosting**, *n*—a change in color in a limited area of a fabric caused by abrasive wear.

DISCUSSION—

Frosting may be the result of differential wear, as in multicomponent blends in which the fibers do not match in shade, or of the abrasion of single-fiber constructions in which there is some variation in penetration, or incomplete penetration, of dye-stuff. The use of the terms “differential wear” and “fibrillation” as substitutes for the concept of frosting is undesirable.

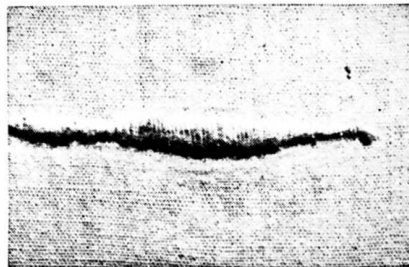
**fuzz ball**, *n*—loose and frayed fibers that have formed into a ball and have then been woven or knitted into the fabric. (*Syn.* lint ball, snow ball) (Compare **pills**)

**fuzzy**, *adj*—characterized by a hairy appearance due to protruding broken fibers or filaments. (*Syn.* hairy)



Fuzzy

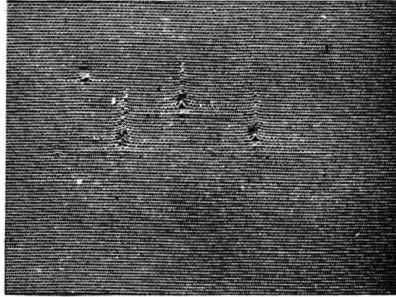
**gout**, *n*—foreign matter trapped in a fabric by accident, usually lint or waste. (See also **slug**)



Gout

*hairy*—See **fuzzy**.

**hang pick**, *n*—a pick, caught on a warp yarn knot for a short distance, producing a triangular-shaped hole in the fabric. (*Syn.* hang shot)



Hang Pick

*hang shot*—See **hang pick**.

*hard end*—See **tight twist end**.

**hard size**, *n*—sections of cloth containing an excessive quantity of sizing. (*Syn.* starch lump)

*harness skip*—See **float**.

*heavy end*—See **coarse end**.

*heavy filling*—See **coarse pick**.

*heavy pick*—See **coarse pick**.

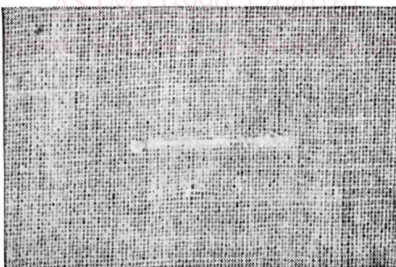
*hitch-back*—See **draw-back**.

**hole**, *n*—*in fabric*, an imperfection where one or more yarns are sufficiently damaged to create an aperture.

**hooked bow**, *n*—a fabric condition in which the filling yarns or knitted courses are in the proper position for most of the fabric width but are pulled out of alignment at one side of the fabric. (See also **double hooked bow**)

**jerk-in**, *n*—*in woven fabric*, an extra filling thread dragged into the shed with the regular pick and extending only part of the way across the cloth. (*Syn.* lash-in, pull-in) (Compare **double pick**)

**kink**, *n*—*in fabric*, a short length of yarn that has spontaneously doubled back on itself to form a loop. (*Syn.* curl, kinky thread, looped yarn, snarl)



Kink (Filling Snarl)

*kinky thread*—See **kink**.

**knitted fabric**, *n*—a structure produced by interlooping one or more ends of yarn or comparable materials.

*ladder*—See **run**.

*lash-in*—See **jerk-in**.

*leader mark*—See **decating mark**.

**let-off mark**, *n*—*in woven fabrics*, a corrugated defect pattern distributed across the fabric width. (Compare **shier**)

DISCUSSION—

Let-off marks are caused by badly adjusted let-off motions of a loom.

*light end*—See **fine end**.

*light filling*—See **thin filling**.

*light pick*—See **thin filling**.