
**Textiles and textile merchandise —
Terms and definitions**

ICS:59.080.30

Published by Ethiopian Standards Agency

©ESA

Table of contents

1	Scope	1
2	Normative references	1
3	Symbols and typeface	1
4	Terms and definitions	2
	Bibliography	115

Foreword

This Ethiopian Standard has been prepared under the direction of Technical Committee for Textile Fabrics (TC 70) and published by the Ethiopian Standards Agency (ESA).

In preparing this Ethiopian Standard reference has been made to the following:
ARS 1551: 2017 Textiles and textile merchandise — Terms and definitions, published by African Organization for Standardization(ARSO).

Acknowledgement is made for the use of information from the above publication.

Textiles and textile merchandise — Terms and definitions

1 Scope

This Ethiopian Standard provides a comprehensive list of general terms, each followed by an applicable definition, for use in the textile industry.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ES ISO 1951, *Lexicographical symbols and typographical conventions for use in terminography*

ES ISO 10241, *International terminology standards — Preparation and layout*

ES ISO 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ES ISO 105-A03, *Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining*

ES ISO 105-A08, *Textiles — Tests for colour fastness — Part A08: Vocabulary used in colour measurement*

ES ISO 2076, *Textiles — Man-made fibres — Generic names*

ES ISO 2424, *Textile floor coverings — Vocabulary*

ES ISO 4921, *Knitting — Basic concepts — Vocabulary*

ISO 6938, *Textiles — Natural fibres — Generic names and definitions*

ES ISO 8388, *Knitted fabrics — Types — Vocabulary*

ES ISO 8498, *Woven fabrics — Description of defects — Vocabulary*

ES ISO 8499, *Knitted fabrics — Description of defects — Vocabulary*

International Commission on Illumination, CIE 15.2:1986, *Colorimetry*

3 Symbols and typeface

The symbols and typeface used in this standard are in accordance with ES ISO 1951 and ES ISO 10241. For ease of reference, the meanings of some of the symbols and typeface used are given in Table 1.

Table 1 — Meanings of symbols or typeface

Symbol or typeface	Meaning
boldface	preferred term
lightface	admitted term
<i>italics</i>	Latin term
angle brackets, < >	subject field identifier

4 Terms and definitions

NOTE Owing to the large number of general textile terms and because the entries are placed in alphabetical order, individual entries are not numbered. Subdivisions are indicated by indentation.

absorbent gauze

SEE **(unmedicated) absorbent gauze**

absorbent lint

plain-weave cotton **fabric** that has a raised **finish** on one side and that is well bleached and highly absorbent

accelerant

substance, often a swelling agent, which, added to a dyebath or to a printing paste, accelerates the rate of diffusion of a dye into the **substrate**

NOTE Accelerants can also be used to increase the rate of reaction in chemical finishing.

accelerated aging

process for obtaining an aging effect in a much reduced period of time

NOTE Different methods are employed in the laboratory to simulate exposure under environmental conditions to heat, light and moisture.

acetylation

process of introducing an ethanoyl (acetyl) radical into an organic molecule by combining cellulose with ethanoic (acetic) acid

NOTE A partial acetylation is sometimes applied to cotton in the form of **yarn** or **fibre** to change its properties.

acid dye

anionic dye characterized by its **substantivity** for protein, polyamide or other **fibres** containing basic groups and that is usually applied from an acidic or neutral dyebath

acid milling dye

acid dye that has a high fastness to wet processes on wool (particularly to milling) and that is normally applied to protein **fibres** from a weakly acidic or neutral dyebath

adhesive-bonded nonwoven fabric

textile material composed of a **web** or **batt** of **fibres**, and that is bonded by the application of adhesive material in liquid form

NOTE Methods of application include **saturation bonding**, **spray bonding**, **print bonding** and **foam bonding**.

affinity

dye affinity

quantitative expression of the distribution of a dye between the **substrate** and dyebath at equilibrium, i.e. the difference between the chemical potential of the dye in its standard state in the **fibre** and the corresponding chemical potential in the dyebath

NOTE Affinity is usually expressed in units of joules (or calories) per mole. Use of this term in a qualitative sense, synonymous with **substantivity**, is deprecated.

air-gap wet spinning

cf. note to **wet spinning**

air-jet loom

air-jet weaving machine

power-operated **single-phase weaving machine** in which the **weft yarn** is propelled through the **shed by a jet** of air

cf. **jet loom**, **weaving machine**

air-jet spinning

SEE **jet spinning**

air-jet texturing

cf. note 1 (h) to **textured yarn**

air-jet weaving machine
SEE **air-jet loom**

air laying

method of forming a **web** or **batt** of **staple fibres** in which the **fibres** are dispersed into an air stream and condensed from the air stream onto a permeable cage or conveyor to form the web or batt

air-quench
cf. note to **quench**

air-texturing
cf. note 2 to **intermingled yarn**, note 1(h) to **textured yarn**

alhambra quilt

jacquard-woven figured **fabric** with a plain ground **weave** that requires two **warps**

NOTE The figuring warp is usually 2-ply and coloured, the ground warp **singles** and undyed. The **weft** is often made on the condenser system, is soft spun, and is of coarse count.

all-over print

fabric that has a printed pattern that covers practically the whole face side

angle of lay

angle at which the **strands** lie in relation to the axis of a **rope**

angola fabric

plain or **twill fabric** made from a cotton **warp** and an **angola-yarn weft**

angola yarn

yarn spun on the woollen system from a mixture of wool and cotton or other **fibre**

angora fabric

extremely soft **fabric** made from **angora yarn**

angora yarn

extremely soft **yarn** spun from the hair of the angora rabbit and that, in most cases, also contains a small proportion of wool or other **fibre**, the amount of which is limited to that necessary to facilitate spinning but does not exceed 5 % (by mass) of the yarn

anionic dye

dye that dissociates in aqueous solution to give a negatively charged coloured ion

anisotropic, adj

descriptive of a surface that has different values in different directions

NOTE For example, an anisotropic surface will change in appearance as it is rotated about its geometric axis, as is the case with velvet.

antisoil finish

substance applied to the surface of, or incorporated into, a **substrate** to prevent soiling

antistatic agent

substance applied to a **substrate** to prevent the accumulation of an electric charge (static)

Arabeva

cf. note (d) to **stitch-bonded fabric**

Arachne

cf. note (a) to **stitch-bonded fabric**

Araloop

cf. note (c) to **stitch-bonded fabric**

artificial weathering test

exposure to cyclic laboratory conditions involving changes in temperature, relative humidity and radiant energy, with or without direct water spray, in an attempt to produce changes in the material similar to those observed after long-term, continuous, outdoor exposure

NOTE The laboratory exposure conditions are usually intensified beyond those encountered in actual outdoor exposure in an attempt to achieve an accelerated effect. This term does not cover exposure to special conditions such as ozone, salt spray and industrial gases.

assisted finish

cf. note to **filling**

astrakhan fabric

woven fabric with pretreated **pile yarn** that is lifted over **wires**, inserted at regular intervals, and woven into a plain-weave ground

astro-dyed method

cf. note to **space dyeing**

AT strands

cf. note 2 to **self-twist spinning**

autoclave

vessel in which textile material can be treated with steam under pressure

NOTE Facilities are often provided for the creation of a vacuum either before the introduction of steam (when the purpose is to achieve better steam penetration) or subsequently (when the purpose is to assist in drying).

automatic loom

automatic weaving machine

power-operated **weaving machine** on which the **shuttles or pirns** are changed automatically

automatic weaving machine

SEE **automatic loom**

azoic dyeing

production of an insoluble azo compound in a **substrate** by interaction of a diazotized amine (azoic diazo component) and a coupling component (azoic coupling component)

baby flannel

lightweight **flannel** used for children's garments

back-filling

filling applied to the back of a **fabric**

backing cloth

fabric used as the backing in the manufacture of oil-baize, linoleum, tufted carpets, etc.

backing warp

SEE **back warp**

backing weft

SEE **back weft**

back warp

backing warp

additional **warp** on the back of a **fabric**, bound or stitched to the ground structure so that it does not interfere with the appearance of the face, but gives greater mass, thickness, warmth, etc.

back weft**backing weft**

additional **weft** on the back of a **fabric**, bound or stitched to the ground structure so that it does not interfere with the appearance of the face, but gives greater mass, thickness, warmth, etc.

bagging

heavy plain-weave fabric made from coarse, hard-twist **rovings or yarns** that consist largely of reworked and waste **fibres**

baize

woven woollen felt used for covering tables and screens

baking**thermofixation**

use of dry heat to achieve the fixation of colorants or chemical **finishes** on textile materials
cf. **setting**

balanced twist yarn

plied or **cabled yarn** which, solely by virtue of the twist combination chosen, has no unbalanced twisting couple

balanced weave

weave in which the average float is the same in the **warp** and **weft** directions, and in which the warp and weft floats are equally distributed between the two sides of the **fabric**

NOTE 1 Balanced weaves include plain, 2/2 **mat**, 2/2 **twill**, mock leno, and many crepe weaves.

NOTE 2 Unbalanced weaves include warp-faced and weft-faced **twill weaves**, satins, and **sateens**.

balloon fabric

fabric which forms a functional part of the lift-creating outer envelope of a lighter-than-air aircraft

NOTE It is usually a simple, single fabric, of tightly woven construction, and could include rip-stop threads to enhance tear resistance, although some plied fabrics are used.

ball top

<packaging> cf. **top**

ball warping

cf. note to **warp**, verb

bar

cf. note to **guide bar**

barathea

woven **fabric** of pebbled appearance, usually of twilled hopsack or broken-rib **weave**, made from silk, **worsted**, or **manufactured fibres** and used for a variety of clothing purposes

basecloth

fabric which can be included within a **needlefelt** to provide dimensional stability and strength and in some cases to facilitate the punching operation

cf. **scrim**

basic dye

cationic dye characterized by its **substantivity** for standard acrylic, modacrylic, basic-dyeable polyester **fibres**, and basic-dyeable polyamide fibres

basket weave

SEE **hopsack weave**

batchwise process

processing of materials as lots or batches in which the whole of each lot or batch is subjected to one stage of the process at a time

batt
batting
web

<fibres> single or multiple sheets of **fibre** used in the production of **nonwoven fabric**

batt
batting
web

<nonwoven fabric> **nonwoven fabric** produced from single or multiple sheets of **fibre**

Batting
SEE **batt**

bauk finish

finish in which woollen material is lightly milled in the grease, scoured, dyed, **stentered** to width, and lightly pressed

bave

silk **fibre** that consists of two **brins** and is complete with its natural gum (sericin) as it is withdrawn from a cocoon formed by a silkworm

BCF
SEE **BCF (yarn)**

BCF (yarn)

bulked continuous filament

textured **continuous-filament yarn**, generally used either as a **pile yarn** in carpets or for upholstery fabrics

NOTE BCF yarn is usually made by hot-fluid jet texturing.

bead

<narrow **fabrio** thickened selvedge of a **zip fastener tape** or **headband** which can be formed by **weaving** or knitting a **cord** or cords integrally with the **fabric** so that they lie substantially on each surface of the **tape** or, alternatively, by weaving a tubular selvedge which incorporates stuffer threads

bearded mote
SEE under **mote**

bearded needle
SEE under **needle**

beating up

forcing the pick of the **weft yarn(s)** left in the warp **shed** up to the **fell** of the cloth by the movement of the **reed**

NOTE This is the third of the three basic motions in **weaving**.
cf. **picking**, **shedding**

bedford cord

fabric showing rounded **cords** in the **warp** direction with pronounced sunken lines between them, produced by the nature of the **weave**

NOTE The weave on the face side of the cords is usually plain, but other weaves can be used. There are **weft** floats of the same width as the cords on the back. Wadding ends can be used to accentuate the prominence of the cords.

beetled finish

<cotton and linen> firm, close and lustrous effect obtained by subjecting the damp **fabric**, wound onto metal beams or wooden rollers, to repeated blows from wooden hammers or metal fallers

bellies
SEE **belly wool**

belly wool
bellies

coarser quality wool from the underside of a sheep

belting**industrial and mechanical belting**

all forms of belts (industrial and mechanical), and rolls of material from which belts are made up, that are designed for the transmission of power or for the purpose of conveying or elevating, or toothed belts for timing as an alternative to gears

endless woven belting

woven **narrow fabric**, usually in plain or 2/2 **twill weave**, in which the **warp** consists of one continuous thread wound in a helix to the required length and woven without join or splice so that the first and last picks are adjacent

solid woven belting

belting consisting of more than one ply, the plies being interlocked in the **weave**, or bound together by binding threads in the course of weaving

NOTE Solid woven belting is usually impregnated or otherwise treated to increase the coefficient of friction and the resistance to moisture and rotting, to improve linear stability, and to impart other desirable properties.

bias binding

product made by cutting wide woven fabric at an angle of 45° to the selvedge and usually by folding it into the centre

bicomponent fibre

manufactured fibre that has two distinct polymer components, both of which are usually **fibre** forming

NOTE 1 Examples of common bicomponent fibre cross sections are illustrated in Figure 1.

NOTE 2 In most bicomponent fibres, the two components adhere firmly to each other, though one can be removed later. However, in some types, the components are deliberately chosen to adhere poorly so that they separate in subsequent processing.

NOTE 3 A variety of complex conjugate and islands-in-the-sea bicomponent cross sections have been used in the production of **ultra-fine microfibre** (see Figure 2).

NOTE 4 Wool and some other animal fibres have a bicomponent structure with a side-by-side configuration of the ortho-cortex and para-cortex, which is associated with natural **crimp**.

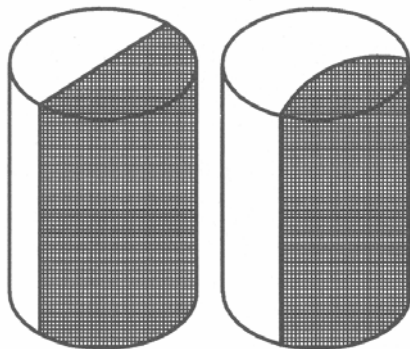


Figure 1(a) — Conjugate cross sections

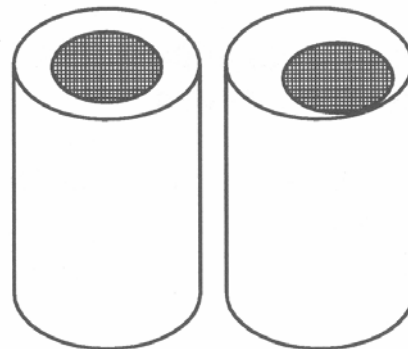


Figure 1(b) — Core-sheath cross sections

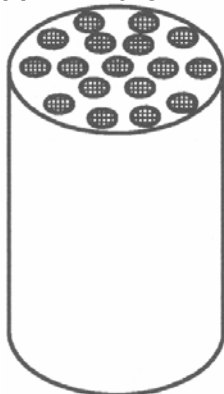


Figure 1(c) — Islands-in-the-sea cross section

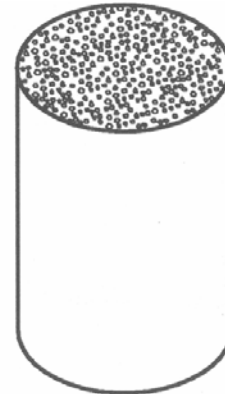


Figure 1(d) — Matrix-fibril cross section

Figure 1 — Examples of common bicomponent fibre cross sections

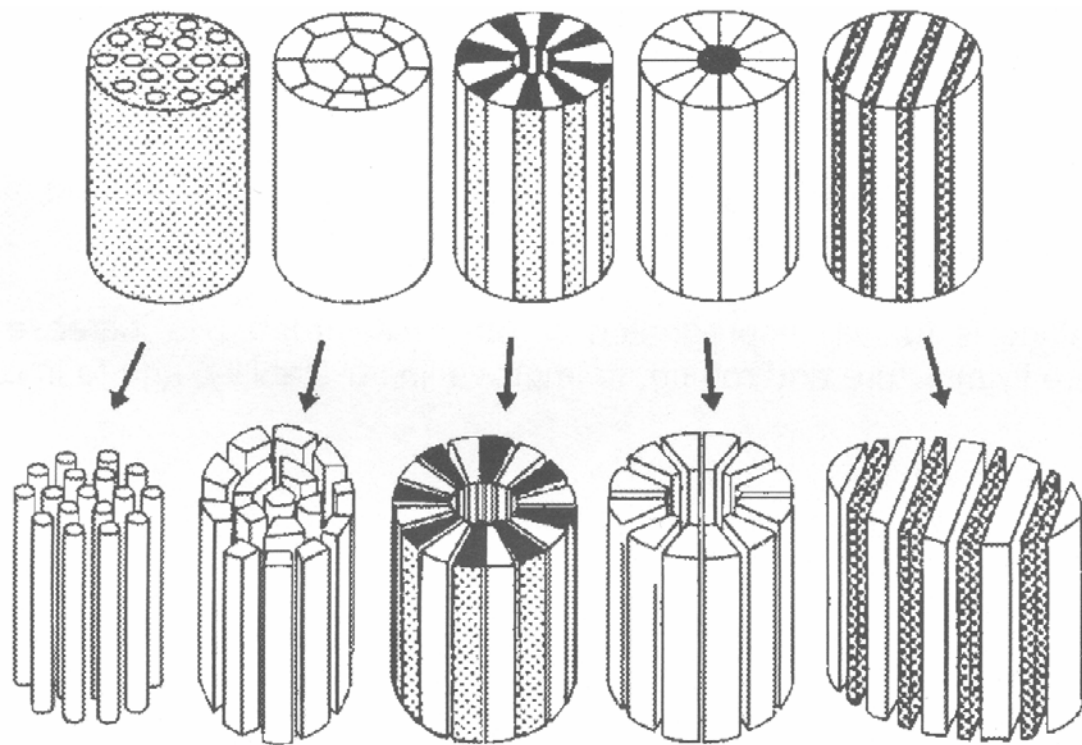


Figure 2 — Examples of conjugate and islands-in-the-sea bicomponent fibre used in the production of ultra-fine microfibre

conjugate fibre

side-by-side bicomponent fibre

configuration of **fibre** mainly used to generate a helical **crimp** in the fibre through the differential shrinkage of the components

core-sheath bicomponent fibre

configuration of **fibre** that can be used in the symmetrical or asymmetrical form to combine the properties of the two components, perhaps taking advantage of particular physical properties such as the strength or conductivity of the inner component and the aesthetic, textile, adhesive, or other properties of the outer component

NOTE The asymmetrical form can also be used for the generation of **crimp**.

fibril-matrix bicomponent fibre

SEE **matrix-fibril bicomponent fibre** under **bicomponent fibre**

islands-in-the-sea bicomponent fibre

configuration of **fibre** that has similar uses to the core-sheath type or that can be used as an intermediate in the production of other specialized types of fibre such as **microfibres** or porous fibres where one component is dissolved, leaving the other intact

matrix-fibril bicomponent fibre fibril-matrix bicomponent fibre

configuration of **fibre** that has fine **fibrils** of varying but restricted length that do not extend along the full length of the bicomponent fibre, and that are of one component embedded at random in a matrix of the other

side-by-side bicomponent fibre

SEE **conjugate fibre** under **bicomponent fibre**

bicomponent yarn

yarn that has two different **staple-fibre** or continuous-filament components

NOTE 1 Although normal usage excludes staple-fibre blends, it includes filament blends. In addition, the term is sometimes used to describe yarns made from **bicomponent fibres** for which the correct term is bicomponent-fibre yarns.

NOTE 2 The following can be regarded as bicomponent yarns:

- a) two-fold staple yarns, when the **singles** components are different;
- b) two-fold **continuous-filament yarns**, when the singles components are different;
- c) yarns in which a filament yarn is doubled or folded with a staple-fibre yarn;
- d) **core-spun yarns**, wrapped yarns, or other core-sheath configurations; and
- e) filament blend yarns.

biconstituent yarn

SEE **filament blend yarn**

billiard fabric

fine, heavily milled and dressed woollen **fabric** used for covering billiard tables

NOTE It is normally produced in plain weave.

binder

<**nonwoven fabric**> adhesive used to hold together the **fibres** in a nonwoven structure

binder

<yarn> thread, continuous **filament** or staple, added at the final stage of the construction of a **yarn** with the primary aims of giving cohesion to the assembly and of binding in special effects when these have been employed

binding

narrow (woven, braided or knitted) **fabric**, used to protect, support or improve the appearance of a seam or edge cf. **bias binding**

felling, simili

SEE **simili binding** under **binding**

glacé binding

woven **narrow fabric** made from polished cotton **warp and weft yarns**, used principally in the men's tailoring trade, and usually in 3/1 **twill weave**, and 12.5 mm wide

Paris binding

binding, with a firm **handle, of twill** or herringbone **twill weave** (usually 3/1) and often used to reinforce clothing subject to high abrasion

NOTE This binding was originally made from silk **warp** and polished cotton **weft**, but is now usually made from mercerized cotton or continuous-filament warp and weft.

simili binding

felling, simili

simili felling

binding made from mercerized cotton **yarns** throughout, in a 3/1 **broken-twill weave** in imitation of satin, distinguished by well-pronounced selvages raised on the face side

simili felling

SEE **simili binding** under **binding**

stay binding

woven **narrow fabric** with cotton **warp and weft**, in 2/2 **twill weave** or derivatives, generally used for covering seams and strengthening garments

blanket cloth

heavy overcoating with a soft raised **finish**

blazer cloth

woven fabric, traditionally all-wool, for apparel, in either solid colours or stripe, that can be milled or raised or both

bleaching

process for improving the whiteness of textile material, with or without the removal of natural colouring matter or extraneous substances or both cf. note to **wet processing**

NOTE The removal of colour from dyed or printed textiles is usually called stripping.

bleaching agent

chemical reagent capable of destroying partly or completely the colouring matter present in textile materials, and leaving them white or considerably lighter in colour

NOTE Examples of bleaching agents include oxidizing agents such as sodium or calcium hypochlorite, sodium chlorite, permanganates, hydrogen peroxide, and reducing agents such as sulfur dioxide and sodium bisulfite.

bleeding

loss of colorant from a coloured material in contact with a liquor, leading to an obvious coloration of the latter, or of adjacent areas of the same or other materials
cf. **staining**

blended woollen, adj

woollen blended, adj

descriptive of **yarns** spun on the condenser system and that have wool as the main component, or of **fabrics** or garments made from such yarns

blended worsted, adj

worsted blended, adj

descriptive of **yarns** in which the **fibres** are reasonably parallel and that have combed wool as the main component, or of **fabrics** or garments made from such yarns

blending

<spinning> process(es) concerned primarily with the mixing of various lots of **fibres** to produce a homogeneous mass

NOTE Blending is normally carried out to mix fibres, which might or might not have similar physical or chemical properties, market values, or colours. Blending is also used to ensure consistency of end product.

blown finish

finish obtained by blowing dry steam through a **fabric**, usually wool-based, which is wrapped with an interleaving cotton, polyester, or aramid fabric on a perforated roller

boarding

process involving heating under moist or dry conditions, carried out to confer a desired shape or size on hose or other knitted garments whilst on a former

NOTE The article in the damp condition, after **scouring**, bleaching or dyeing, is dried on a specially shaped former, either by heating this former internally or by placing it between two steam-heated platens. If the drying is done in a hot chamber, the process is known as machine-finishing. When the boarding is done by pressing between heated platens, it is usually known as trimming, pressing, or press-finishing. The trimming, **pressing** or press-finishing operations carried out on dried goods give the desired shape to the articles, but their prime purpose is to remove the moisture from the article without leaving it creased.

bobbin

cylindrical or slightly tapered former with or without a flange or flanges, for holding **slubbings**, **rovings** or **yarns**

NOTE The term is usually qualified to indicate the purpose for which it is used, for example ring bobbin, twisting bobbin, spinning bobbin, condenser bobbin, weft bobbin and bottle bobbin, cf. **pirn**

boiling off degumming

removal of sericin (silk gum) from silk **yarns** or **fabrics**, or from silk waste before spinning, by a controlled, hot, mildly alkaline treatment intended to have little or no effect on the underlying fibroin

boll

seed-case and its contents on the cotton plant

bolt

SEE **piece**

bolting cloth

lightweight **open-weave fabric** characterized by its fine and uniform mesh, used for sifting flour or for screen-printing

NOTE Both **warp and weft** threads are accurately spaced and are woven in simple leno or other non-slip construction in order to maintain the mesh size.

bonding agent

adhesive substance used to join **fibres, yarns or fabrics** together, and that is often rendered insoluble in water and dry-cleaning solvents by the application of heat or by chemical means

boric lint

bleached cotton **fabric** that has a raised **finish** on one side, is dyed pink, is impregnated with boric acid and is highly absorbent

botany wool

tops, yarns and fabrics made from **merino wool**

bouclé yarn

SEE under **fancy yarn**

bow

<weaving> curvature of the **warp or weft** in a cloth

NOTE The cloth is said to be warp-bowed or weft-bowed according to which set of threads is curved.

braid plait

product resulting from the process of interlacing three or more threads in such a way that they cross one another in diagonal formation forming flat, tubular or solid constructions

NOTE Tubular **fabrics** made by braiding can be constructed with or without **core**, gut, filler or stuffing threads, which, when present, are not interlaced in the fabric.

braided rope

SEE under **rope**

brattice cloth

coarse cloth used for screens, ventilators, etc., especially in mines

NOTE When brattice cloth is used in mines, it is often coated.

breaking extension

SEE **extension at break**

breaking force

SEE **tensile strength at break**

breaking length

theoretical length of a specimen (usually of yarn) whose mass would exert a force sufficient to break the specimen

NOTE The breaking length in kilometres is numerically equal to tenacity (gf/tex).

breaking strength tensile strength

maximum tensile force recorded when a test piece is extended to breaking point
cf. **tensile strength at break**

breaking stress

maximum stress developed in a specimen stretched to rupture

break spinning

SEE **open-end spinning**

breathable fabric

fabric used in outdoor clothing and offering high levels of resistance to liquid water (usually rain) penetration and wind resistance but a relatively low level of resistance to water-vapour transmission, especially when dry

NOTE Four types are commonly used:

- a) fabrics with breathable coatings;
- b) laminates with a water-resistant but breathable membrane;
- c) fabrics depending on **fibre** swelling, when wet, to close inter-fibre and inter-yarn interstices; and
- d) fabrics with a high resistance to fibre-surface wetting, often closely woven using hydrophobic **microfibre yarns** where the inter-fibre and inter-yarn interstices are very small.

bright

descriptive of textile materials, particularly **manufactured fibres**, the natural **lustre** of which has not been significantly reduced

Brighton honeycomb

cf. note (b) to **honeycomb**

brin

single **filament** of silk resulting from the degumming of the **bave** withdrawn from the cocoon

bristle

<brushware> essential filamentous component of brushes and brooms

bristle

<fibre> rugged, stiff hair or **filament**, usually short and straight, and often pointed and prickly

bristle

<origin> short, stiff hair, for example on the back of a hog

broadcloth, cotton

SEE **cotton broadcloth**

broadcloth, wool

SEE **wool broadcloth**

broadtail

<wool> SEE **karakul**

brocade

jacquard-woven figured **fabric**, usually of single texture, in which the figure is developed by floating the **warp** threads, the **weft** threads, or both, and in which the threads are interlaced in a more or less irregular order on a ground of simple **weave**

broken twill

twill weave in which the **move number** is not constant, with the result that the continuity of the **twill** line is broken

cf. note 1 to **twill (fabric)**

bronzing

metallic sheen which can occur on a textile material or surface coating, usually when deeply coloured

NOTE In textile coloration, the effect is usually caused by excessive concentration of colorant at the surface of the **substrate**. This is normally undesirable, but is sometimes produced deliberately, for example in the case of some indigo dyeings.

brushed fabric

fabric in which the **fibres** on one or both surfaces have been raised by means of **brushing**
cf. **raising**

brushing

finishing process in which the **fabric** is passed over one or more revolving brushes in order to raise the surface **fibres**

NOTE This can be followed by cutting, cropping or shearing.

buckram

stiff **fabric**, generally linen or cotton, made by impregnating a plain-weave open-set fabric with fillers and stiffeners

buckskin

fabric similar in **handle** and appearance to, but heavier than, a **doeskin fabric**, that is made from fine **merino wool**, and that is close-set, heavily milled, dressed and closely cut

bulked continuous filament

SEE **BCF (yarn)**

bulked yarn

high-bulk yarn

yarn that has been treated mechanically, physically or chemically so as to have a noticeably greater volume or bulk

NOTE 1 <staple yarns> The increased bulk can be obtained by the use of **bicomponent fibres** or by blending together, during yarn spinning, **fibres** of high and low potential shrinkage, for example high-bulk acrylic yarns. During subsequent hot or wet processing, the greater contraction of the high-shrinkage fibres causes the yarn to contract longitudinally and the low-shrinkage fibres to buckle, thus increasing the bulkiness of the yarn.

NOTE 2 <continuous-filament yarns> The increased bulk can be obtained by one of the texturing processes; **textured yarn** is now the preferred term for yarns of this type.

bulky yarn

yarn that has an apparent density much greater than its real density

NOTE The yarn has a diameter larger than that indicated by the **yarn linear density**, in comparison with yarns of a similar **fibre** type.

bullion cord twine

highly twisted assembly of yarns which can be spirally covered with **continuous-filament yarns**

bump top

<packaging> cf. **top**

Bundesmann test

cf. note to **water repellency**

bunting

fabric made for the manufacture of flags and produced from **yarns** spun on the **worsted** system

NOTE Bunting was originally a special type of wool fabric, of plain weave, but now tends to be a nylon-wool blend.

burlap

SEE **hessian**

burry wool

wool contaminated with vegetable impurities adhering to the fleece

bursting strength

multi-directional resistance to rupture of a circular **fabric** specimen

butcher's linen

strong, plain-weave heavy **linen fabric** used for butcher's aprons, dresses and suiting

butter muslin cheesecloth

lightweight **fabric** made from carded cotton **yarns** and that has an open plain weave and is normally unbleached

cable, verb

twist together two or more **folded yarns**

cabled yarn

two or more **folded yarns** twisted together in one or more operations

NOTE 1 Combinations of folded yarn(s) and **single yarn(s)** can be described as cabled yarns, for example a single yarn twisted together with two folded yarns to give softness to the resulting yarn.

NOTE 2 In the tyre-yarn and tyre-cord sections of the textile industry, cabled yarns are termed cabled cords or **cords**.

cable-laid rope

SEE under **rope**

cake

package, roughly cylindrical in shape, of **continuous-filament yarn** produced in the viscose spinning industry by means of a **Topham box**

calender, noun

machine in which heavy rollers (bowls) rotate in contact under mechanical or hydraulic pressure

NOTE 1 The bowls might be unheated, or one might be a thick-walled steel shell heated internally. All bowls can rotate at the same surface speed or, for example in **friction calendering**, one highly polished and heated bowl might rotate at a higher surface speed than the rest. In certain specialized machines, for example those for knitted goods, two adjacent bowls might be heated, or, in the case of a laundry calender, one roller might work against a steam chest shaped to the curvature of the roller.

NOTE 2 Special calenders with engraved heated bowls imprint a pattern in relief or modify the **fabric** surface to give high **lustre**. cf. **emboss**, **schreiner**

calender, verb

<coating> use a **calender** with the bowls a definite distance apart, so that the rubber or plastics mass is attenuated to a thin uniform sheet, which is then pressed into a firm adhesion with one side of the **fabric** passing through

NOTE This is sometimes referred to as calender spreading.

calender, verb

<finishing> pass **fabric** through a **calender**, normally to smooth and flatten it, to close the intersections between the **yarns**, or to confer surface glaze

calender bonding

method of making a **thermally bonded nonwoven fabric** in which **calender** rollers are used to apply heat and pressure to a fibre **web** or **batt**, which causes bonding by the softening or melting of heat-sensitive material

calico

plain cotton **fabric**, generally heavier than muslin, but lighter than **canvas**

cambric

lightweight, closely woven plain **fabric** that is usually given a slight stiffening

candlewick fabric

tufted **fabric** used mainly for bedspreads

canvas

fabric usually made from cotton, flax, hemp or jute, of mass traditionally ranging from 200 g /m² to 2000 g/m² in plain or double-end plain weave

NOTE 1 In cotton canvas, the **yarns** can be **singles** but are frequently plied. In other canvases, the yarns are generally singles. The **warp** predominates, and a feature of the heavier canvases is the very close packing of the warp, which is highly crimped over a straight **weft**.

NOTE 2 The term canvas covers cloths with a great variety of uses, but the salient features of all are strength and firmness.

cap spinning

spinning system in which the spindle supports a stationary cap, the lower edge of which guides the yarn onto the revolving spinning package which is traversed cf. **spinning**

caracul

<wool> cf. note to **karakul**

carbine needle

SEE under **needle**

carbonizing

chemical degradation of cellulosic matter to a friable condition in order to facilitate its elimination from admixture with other **fibres**

NOTE The process involves treatment with acid, as by the use of hydrochloric acid gas (dry process) or sulfuric acid (wet process), followed by heating.

carded yarn

yarn produced from **fibres** that have been carded but not combed

carding

disentanglement, cleaning and intermixing of **fibres** to produce a continuous **web** or **sliver** suitable for subsequent processing and achieved by passing the fibres between surfaces that move relative to each other and that are covered with card clothing

NOTE The process follows opening and blending. Fibres can be fed to the card by a chute-feed, or a weigh pan, or in the form of a lap, and are subjected to a draft of 50 to 150. The card produces a web which can be used in the manufacture of **nonwoven fabrics**, **slubbings** or, more commonly, slivers which might be subjected to further processing before spinning or which can be directly spun.

condenser carding

SEE **woollen carding** under **carding**

short-staple carding

production of a **web** or **sliver** on a card, which has slow-moving or stationary flats and is usually used for processing cotton

NOTE When flats are slow moving over the top of a card, collectively, they are usually referred to as revolving flats and the card is termed a revolving flat card.

woollen carding condenser carding

production of **slubbings** from blended tufts of **fibres** that are suitable for spinning

NOTE The tufts are carded to produce an even web of blended loose fibres, which is divided into ribbons of uniform width and rubbed to form **slubbings** by the rubbing aprons of the card condenser. Roller and clear cards are used.

worsted carding

production, from scoured loose wool, of a continuous **sliver** suitable for subsequent **gilling** and combing

NOTE Roller and clear cards are used.

card web
<carding> cf. **web**

carrier

<braiding machine> moving holder for one or more **yarn** packages, which moves in a track on a braiding machine

carrier

<coloration> type of accelerant, particularly used in the dyeing or printing of hydrophobic **fibres** with **disperse dyes**

carrier

<fibre> **fibre** component that is blended with the main constituent fibre to improve processing behaviour

carrier

<spinning> positively driven, smooth metal roller set between the major drafting rollers on some **worsted** drawing boxes and spinning frames to control the **fibres** during **drafting**

carrier

<yarn> **yarn** introduced at some stage of processing to support the main component, generally as an aid to further manufacture

carroting

modification of the tips of fur **fibres** (rabbit fur) by chemical treatment to improve their **felting** capacity

NOTE The reagent originally used was mercury in nitric acid, but mixtures of oxidizing and hydrolysing agents are now more common.

case cord

soft, pliable **cord** consisting of two or more components twisted together, each component being made of a **core** which is helically covered at an acute angle by multiple ends of **continuous-filament yarns**

casement cloth

lightweight to medium-weight **weft-faced** curtain **fabric** of cotton or **manufactured fibre** yarns

cashmere wool

cf. note to **hair**

cationic dye

dye that dissociates in aqueous solution to give a positively charged ion

cavalry twill

firm **warp-faced fabric** in which the **weave** gives steep double **twill** lines separated by pronounced grooves formed by the **weft**

cellular fabric

fabric constructed so as to have a close and orderly distribution of hollows or holes

NOTE In woven fabric this can be achieved by **honeycomb**, leno or **perforated weave**. cf. **leno fabric**

chaff

component of trash in cotton in the form of a heterogeneous assortment of vegetable fragments, most of them being small pieces of leaf and stalk

chain warping

cf. note to **warp**, verb

chambray

lightweight plain-weave cotton **fabric** with a coloured **warp** and white **weft**, producing a mottled appearance

NOTE It can also be made in striped, checked or figured patterns. The finer quality chambrays can have a silk weft, whereas synthetic **yarns** or cotton blends might be used in cheaper fabrics.

check

<fabric> two or more stripes of colour in the warp and weft direction (or a stripe of surface effects caused by the use of different **weaves or yarns** (or both) in the **warp and weft** direction), which results in a square or crossing line pattern

cheese

cylindrical package of **yarn** that might have tapered or rounded ends and in which the yarn is cross-wound onto a flangeless support

cheesecloth

SEE **butter muslin**

cheese warping

cf. note (b) to **warp**, verb

chemic

SEE **chemic(k)**

chemical fibre

SEE **manufactured fibre** under **fibre**

chemic(k)

sodium or calcium hypochlorite solution

chenille fabric

fabric containing chenille yarn in the **weft**

chenille yarn

SEE under **fancy yarn**

chiffon

very light, sheer, open-mesh **fabric** made from **manufactured fibres** in plain weave

NOTE Originally chiffon was made from silk **yarns**.

chlorination

<textile processing> treatment of a textile material with chlorine

NOTE The chlorine can be in the form of gas, or its solution in water, or it can be obtained from a suitable compound. Wet chlorination implies that the goods are treated in aqueous solutions containing chlorine or a chlorine-yielding reagent. Dry chlorination implies treatment under non-aqueous conditions, for example by chlorine gas.

chrome dye

mordant dye capable of forming a chelate complex with a chromium ion

chrome mordant process

method of dyeing in which the **fibres** are mordanted with a solution of a chromium compound and subsequently dyed with a suitable **chrome dye**

chromogen

chemical compound that either is coloured or can be made coloured by the attachment of suitable substituents

chromophore

that part of the molecular structure of the **chromogen** that is responsible for the appearance of colour

circular loom

cf. note to **wave shed weaving machine**

circular weaving machine
cf. note to **wave shed weaving machine**

circular weft knitting machine
SEE under **knitting machine**

clearing
removal, from a dyed or printed textile, of surplus colorant which, if allowed to remain, would mar the appearance or quality of the textile

clip stenter
cf. note 1 to **stenter**, noun

cloqué, woven
SEE **woven cloqué**

clothing wool
wool of short **fibre**, not suitable for combing, and used in the manufacture of woollens

cloud yarn
SEE under **fancy yarn**

coated fabric
textile **fabric** on which there has been formed *in situ*, on one or both surfaces, a layer, or layers, of adherent coating material

coating flock
SEE under **flock**

cohesive set
cf. note to **temporary set** under **setting**

cold crack temperature
temperature below which the coating on a **coated fabric** or the base fabric cracks when the folded fabric is cooled under specified test conditions

cold drawing
<synthetic filaments and films> **drawing** of synthetic **filaments** or films without the intentional application of external heat

colour
particular visual sensation caused by the light emitted by, transmitted through, or reflected from, the object

NOTE 1 The visual sensation enables the eye to distinguish differences in its quality, such as might be caused by differences in the spectral distribution of the light rather than by differences in the spatial distribution or fluctuations with time.

NOTE 2 The colour of a non-self-luminous object is dependent on the spectral composition of the incident light, the spectral reflectance or transmittance of the object and the spectral response of the observer.

NOTE 3 Colour can be described approximately in terms of **hue**, saturation and lightness, or can be specified numerically by chromaticity co-ordinates, such as those defined by the CIE standard observer data in CIE publication No. 15.2, or can be specified by reference to visual standards, such as the *Munsell one-volume book of color*.

colour-and-weave effect
effect developed by a small-group colour patterning of **warp or weft** (or both) in a woven **fabric**

NOTE The various combinations of the warp and weft floats of the constituent colours produce a distinctive effect which renders the **weave effect** virtually indistinguishable and often the colour order of the threads is not apparent.

colour constancy

ability of a coloured object to give the same general colour impression when viewed under different illuminants, the observer having been chromatically adapted in each case

NOTE The most common comparison is made between the impression under artificial light, for example tungsten filament, and that under daylight.

combed cotton yarn

smooth cotton **yarn** made from medium and long staple cottons from which the short **fibres** have been removed by a combing process

combed yarn

yarn produced from **fibres** that have been carded (or prepared) and combed

comber web

<carding> cf. **web**

combined fabric**laminated fabric**

material composed of two or more layers, at least one of which is a textile **fabric**, bonded closely together by means of an added adhesive, or by the adhesive properties of one or more of the component layers

combined rope

SEE under **rope**

commercial allowance**conventional allowance**

agreed upon value to be added to the clean, dry mass of a textile material (after it has been extracted and dried by means of prescribed methods) in order to obtain its commercial mass, **linear density**, or mass per unit area, expressed as a percentage of the mass of the extracted and dried material

commercial mass

calculated mass that a consignment of textile material would have either if the **commercial moisture regain** were added to the dried mass of the material or if the **commercial allowance** were added to the extracted and dried mass of the material

commercial moisture regain

agreed upon value to be added to the dry mass of a textile material (after it has been dried by means of prescribed methods) in order to obtain its commercial mass, **linear density**, or mass per unit area, expressed as a percentage of the mass of the dried material

compact spinning

modified **ring-spinning** system in which the **fibre** strand from the main drafting zone is transversely compacted or condensed

NOTE 1 The compaction normally takes place immediately before the final delivery roller and between the drafting system and twist insertion zone or spinning triangle. The usual means of **strand** compaction is a narrow, longitudinal suction slot.

NOTE 2 The effect of the compaction and the near elimination of the spinning triangle is to increase **yarn** strength, reduce hairiness and reduce the liberation of fly.

composite

SEE **composite (material)**

composite (material)

product formed by the intimate combination of two or more discrete physical phases

NOTE A solid matrix and a fibrous material are two examples of discrete physical phases.

compound fabric

layered woven **fabric** in which the separate layers or plies, each with its own **warp and weft**, are produced simultaneously and stitched together in one **weaving** process

NOTE Fabrics comprising two plies are known as double fabrics and others are known by the number of plies they contain, for example 3-ply fabric.

compound needle

SEE under **needle**

compressive shrinkage

process in which **fabric** is caused to shrink in length, for example by compression

condense dye

dye which, during or after application, reacts covalently with itself or other compounds, other than the **substrate**, to form a molecule of greatly increased size

condenser carding

SEE **woollen carding** under **carding**

condenser spun

cf. note 2 to **woollen**

condenser-spun yarn

yarn spun from a **sliver** or a **stubbing** that has been consolidated from strips of card web by **rubbing**

condition, noun

moisture present in textiles

cf. **moisture content**, **(moisture) regain**

condition, verb

<processing> add relatively small quantities of water to textile materials

NOTE The following are examples of methods used for applying water:

- a) mechanical means during **gilling** or winding;
- b) the use of conditioning machines; and
- c) storing in an atmosphere of high relative humidity.

condition, verb

<testing> allow textile materials to come to hygroscopic equilibrium with the surrounding atmosphere or with the **standard atmosphere for testing**

NOTE The object of conditioning is to prepare for testing, or to bring textiles to an agreed upon moisture content for sale, or to facilitate later processing.

cone

<support> conical support on which **yarn** is wound

cone

<winding> conical package of yarn wound on a conical support

conjugate fibre

SEE under **bicomponent fibre**

(continuous-)filament yarn

monofilament yarn

multifilament yarn

yarn composed of one or more **filaments** that run essentially the whole length of the yarn

NOTE Yarns of one filament and those of more filaments are usually referred to as monofilament and multifilament yarns respectively.

continuous yarn felting

process whereby **slivers**, **rovings**, **slubbings**, or **yarns** are felted on a continuous basis

NOTE This is achieved by passing wool-rich material through a unit in which it is agitated in an aqueous medium where **felting** takes place. The process is used to produce a yarn, or to consolidate a spun yarn, cf. **spinning**

control specimens

set(s) of specimens from a batch, kept under specified storage conditions, and tested as required to provide comparison of changes in physical properties with changes to other specimens from the same batch after exposure to defined conditions

conventional allowance

SEE **commercial allowance**

conventional moisture regain

<textile material> agreed upon value which is used to represent the mass of water in any form which the material contains when, after preconditioning, it comes into equilibrium with the standard atmosphere

converting

tow-to-top conversion tow-to-top converting

production, from a filament **tow** or tows, of a staple **sliver** in such a way that the essentially parallel arrangement of the **filaments** is maintained

NOTE 1 If subsequently a top is required, further processes or rebreaking or **gilling** might be necessary and the whole operation is then often referred to as **tow-to-top converting** or **tow-to-top conversion**.

NOTE 2 The two methods of converting most commonly employed are

- a) crush cutting, in which the filaments of the tow are severed by being crushed between an anvil roller and a cutting roller with raised blades helically disposed round its surface; and
- b) stretch breaking, in which the filaments of the tow are broken by progressive stretching between successive sets of rollers.

cop

<spinning> type of **yarn** package spun on a mule spindle or a ring tube

cop

<support> small cylindrical flangeless cardboard or plastics tube onto which **sewing thread** is wound

cord

variety of textile **strands**

NOTE Such strands include **cabled yarns**, **plied yarns**, and structures made by braiding, knitting or **weaving**.

cordage

product, regardless of size, made by twisting or braiding textile **yarns** and which is generally round in cross section and capable of sustaining loads

cord fabric

rib **fabric** that has prominent ribs

NOTE 1 The ribs are referred to as **cords**.

NOTE 2 Not all fabrics that have prominent ribs are covered by this term.

corduroy

cut-weft **pile fabric** in which the cut **fibres** form the surface and in which the binding points of the pile **wefts** are arranged so that after the **pile** has been cut, **cords** or ribs are formed in the direction of the **warp**

NOTE Velveteen **fabrics** are sometimes cut to give a corduroy appearance.

core

central portion of a gimp, **cord** or **rope** which can consist of parallel, twisted, cabled or knitted **strands** but which is not combined structurally with the **gimp**, cord or rope

coredon

2/1 woollen dress **fabric** produced with fine **warp** and coarse **weft**

core-sheath bicomponent fibre

SEE under **bicomponent fibre**

core-spun yarn

yarn consisting of a yarn surrounded by **staple fibres**

NOTE The yarn has the strength and elongation of the central thread whilst exhibiting most of the other characteristics of the surface staple fibres. Examples are

- a) **sewing thread** consisting of a central synthetic **continuous-filament yarn** surrounded by cotton **fibres**,
- b) **worsted yarn** with textured nylon **core**, for example typically 1/24's **worsted** count (37 tex) with approximately 33 % of nylon. These yarns are normally produced to give strength and elasticity to the **fabric**, and
- c) spun yarn from either natural or **manufactured fibres** incorporating an elastomeric core, normally used in stretch fabrics.

core yarn

yarn consisting of a number of component yarns, of which one or more are constrained to lie permanently at the central axis of the final thread, whilst the remaining yarns act as cover yarns

corkscrew yarn

SEE **spiral yarn** under **fancy yarn**

co-spun yarn

SEE **filament blend yarn**

cotton broadcloth

lightweight **fabric** of poplin type, used extensively on the North American continent for shirting

count of reed

reed number

sett

<weaving> number of dents per unit width of reed

NOTE 1 There have been many units in common use, for example dents per inch, dents per two inches, groups of 20 dents per 36 inches, dents per 10 cm.

NOTE 2 The recommended unit is dents per centimetre.

count of yarn

grist

yarn count

yarn linear density

yarn number

method of expressing the mass per unit length or the length per unit mass of a **yarn**

cf. **linear density**

cover

<finishing> degree to which the underlying structure is concealed by the finishing materials or treatments

cover

<structure> degree of evenness of thread spacing

covered yarn

yarn made by feeding one yarn under a controlled degree of tension through the axis or axes of one or more revolving spindles carrying the other (wrapping) yarn(s)

cf. **elastomeric yarn**

cover factor

number that indicates the extent to which the area of a **fabric** is covered by one set of threads

coverstock

permeable **fabric** used in hygiene products to cover and contain an absorbent medium

crabbing

process used in the **worsted** trade to set **fabric** in a smooth flat state so that it will not cockle, pucker or wrinkle during subsequent wet processing

NOTE The fabric is treated in open width and under **warp-way** tension in a hot or boiling aqueous medium, the tension being maintained while the fabric is cooling,
cf. **setting**

crease recovery

ability of a **fabric** to recover from creasing

NOTE 1 Crease recovery is often specified quantitatively in terms of crease-recovery angle measured in the **warp** and **weft** directions.

NOTE 2 In the USA, other forms of test method might be used, for example wrinkle-resistance rating.

crease-resistant finish

easy-care finish (deprecated)

wrinkle-free finish

finish, usually applied to **fabrics** or garments of cellulosic **fibres** or blends, that improves the **crease recovery** and smooth-drying properties

NOTE In the process used most extensively, the fabric is impregnated with a solution of a reagent that penetrates the fibres and, after drying and curing, cross-links the fibre structure under the influence of a catalyst and heat.

creepage

relaxation shrinkage that occurs under normal conditions of storage

crêpe de chine

lightweight **crepe fabric** of plain weave, made from two S and two Z highly twisted **continuous-filament yarns** alternating in the **weft**, and with a normally twisted continuous-filament **warp**

crêpe fabric

fabric characterized by a crinkled or puckered surface

NOTE The effect can be produced in a variety of ways, for example by the use of S and Z highly twisted **yarns**, by the use of a particular construction, or by chemical or thermal treatment to provide differential shrinkage in the finished fabric.

embossed crêpe

fabric with a crêpe appearance imparted by embossing rollers

NOTE The permanence of the effect is governed by the **fibre** used or by the finish accompanying the embossing process.

woven crêpe

fabric produced by the use of highly twisted S and Z **yarns**, such as **crêpe de chine**, **crépon**, **marocain**, **georgette** and **crépon georgette**, or by the use of crêpe, oatmeal crêpe or **moss-crêpe weaves**

crêpe suzette

SEE **crépon georgette**

crêpe weave

weave that has a random distribution of floats so as to produce an all-over effect in the **fabric** to disguise the repeat

crêpe yarn

<handknitting> **balanced twist yarn** with a plaited appearance produced by the twisting together of three or four two-fold yarns normally using Z, S and Z-twists

crêpe yarn

<weaving> twisted and twist-lively **yarn** which can be used in the production of **crêpe fabrics**

NOTE The **twist liveliness** can be achieved through the insertion of a very high twist or through the insertion of a moderate twist with an additional, thermally set false twist.

crêping

<chemical treatment> treatment designed to produce an effect similar to the wet treatment crêpe effect

crêping

<wet treatment> treatment that allows the relaxation of the strain of highly twisted crêpe yarns in **fabric** and so produces a characteristic crêpe effect

crépon

crêpe fabric, more rugged than the average crêpe, with a fluted or crinkled effect in the **warp** direction

crépon georgette

crêpe suzette

georgette in which all the **weft yarn** has the same direction of twist

cretonne

printed **fabric**, originally of cotton, and of greater mass than a chintz

crimp

<fibre> waviness of a **fibre**

NOTE This fibre characteristic can be expressed numerically as the crimp frequency or as the difference between the lengths of the straightened fibre and crimped fibre, expressed as a percentage of the straightened length

crimp

<yarn> waviness or distortion of a yarn due to interlacing in the **fabric**

NOTE 1 In woven fabrics, the crimp is measured by the relation between the length of the fabric sample and the corresponding length of yarn when it is removed and straightened under suitable tension.

NOTE 2 Crimp can be expressed numerically as

- a) percentage crimp, which is 100 divided by the fabric length and multiplied by the difference between the yarn length and the fabric length, and
- b) crimp ratio, which is the ratio of yarn length to fabric length.

In both methods, the fabric length is the denominator.

crimped length

SEE under **fibre length**

crimp, latent

SEE **latent crimp**

crimp setting

cf. note to **setting**

crinoline

<fabric> stiff **fabric** similar to **buckram**, made from a cotton **warp** and a horsehair **weft**

crinoline

<garment> petticoat made of crinoline **fabric**, sometimes hooped, worn under a skirt in order to distend it

crochet-knitting machine

SEE under **knitting machine**

crocking rubbing

transfer of colour from the surface of a coloured **fabric** to an adjacent area of the same fabric or to another surface principally by rubbing action

crockmeter

apparatus for evaluating the colour fastness to **rubbing** or **crocking** of dyed or printed textiles

crockmeter
SEE under **crocking**

cross-ball warping
cf. note to **warp**, verb

cross-bred yarn
worsted-spun yarns from 44's to 58's **tops** and graded as low, medium or good

cross dyeing
dyeing of a mixture of **fibres**, at least one component of which is already coloured

cross-laid nonwoven fabric
fabric made from a **web** or **batt** by cross lapping, followed by any type of bonding process

curing
<fabric> process that follows the addition of a **finish** to a textile **fabric** and in which appropriate conditions are used to effect a chemical reaction

NOTE Heat treatment for several minutes is common, but a higher temperature for a short period of time and high moisture regain (moist curing) are also used.

curing
<polymerization> process in which one or more polymers containing a small or large number of repeating units are chemically crosslinked into a polymer network

curing
<rubber> vulcanization of rubber, whether by the application of heat or by passing through cold sulfuric chloride solution (cold cure)

cut
length of **fabric** in the **grey** or loomstate, or the length of **warp** required to produce it

cuttle, verb
place **fabric** in loose transverse folds, usually in open width

NOTE Guttled fabric is sometimes known as "lapped" fabric.

cylinder-and-dial knitting machine SEE under **knitting machine**

damask
figured **fabric** made from one **warp** and one **weft** in which warp-satin and **weft-sateen weaves** are sometimes introduced

dead fibre
<cotton> extreme form of immature cotton **fibre**
cf. **maturity**, **thin-walled fibre**

dead twist
SEE **twist set**

decatizing
SEE **decatizing**

decatizing
decatizing
finishing process used chiefly to improve the **handle** and appearance of wool **fabric**

deep-dyeing fibres
fibres modified so as to have greater uptake of **dyes** than standard fibres of the same generic type

degreasing

<textile material> removal of natural fats, waxes, grease, oil and dirt from any textile material by means of an organic solvent

degreasing

<wool> removal of grease, **suint**, and extraneous matter from wool by an aqueous or an organic solvent

degree of orientation

extent to which the macromolecules composing a **fibre** or film lie predominantly in one direction

NOTE 1 In the case of fibres, the predominant direction is usually the fibre axis.

NOTE 2 There are several methods for assessment of the degree of orientation, of which measurement of birefringence is one of the most usual.

NOTE 3 The degrees of orientation of crystalline and non-crystalline regions can be evaluated separately.

degree of polymerization

DP

average number of repeating units in the individual macromolecules in a polymer

NOTE In general, this average will depend on the basis on which it is calculated, which should be stated. For example it can be based upon a mass or a number average.

degumming

SEE **boiling off**

delaine

lightweight all-wool **fabric** in plain weave, ornamented by printing

delust(e)rant

material added to a spinning composition before **extrusion** to reduce the **lustre of a manufactured fibre**

NOTE 1 The anatase form of titanium dioxide is commonly used for this purpose.

NOTE 2 Terms used to indicate the level of delustrant in **manufactured fibres** include: clear, **bright**, semi-dull, **dull**, semi-matt, matt, extra dull and super-dull.

delustrant

SEE **delust(e)rant**

denier

mass, in grams, of 9 000 m of a **fibre, filament or yarn** cf. **tex system**

denim

3/1 warp-faced cotton **twill fabric** made from yarn-dyed **warp** and undyed **weft yarn**

NOTE More recently, other weaves have been used in lighter constructions.

dent

unit of a **reed** comprising a reed wire and the space between adjacent wires

depth

<coloration> colour quality, an increase in which is associated with an increase in the quantity of colorant present, all other conditions (viewing etc.) remaining the same

design paper

point paper

<knitting> paper printed with a series of horizontal and vertical lines, dots, or other shapes representing a ground structure on which the draft of a design is plotted

design paper

point paper

<weaving> paper ruled with vertical and horizontal lines in a manner suitable for showing **weaves** and designs

NOTE Generally, each space between vertical lines represents one end and each space between horizontal lines represents one pick. The design paper commonly used has equally spaced fine rulings, with heavy overruling in blocks of eight by eight. For figured designs, other rulings can be used, for example in jacquard designs it is convenient to use these rulings according to

- a) the number of needles in a short row, and
- b) the ratio of numbers of ends to picks per length, the object being to facilitate card cutting and to ensure that the design is represented in the correct proportion, width to length.

desizing

removal of **size** from woven **fabrics**

developing

formation of a colorant, or chemical modification of a colorant, by a coupling reaction

diazotize

convert a primary aromatic amine into the corresponding diazonium salt, by treatment with nitrous acid

diffusion

movement of substances under the influence of a concentration gradient

dimensional stability

<property> ability of a **fabric** or floorcovering to retain its dimensions when exposed to use or an aging process, water, washing, steaming, drying, or other process

dimensional stability

<testing> changes in length or width, or both, of a textile when subjected to specified conditions

NOTE 1 The changes could be positive or negative.

NOTE 2 The changes could be reversible or irreversible.

dip, noun

<laboratory dyeing> solution prepared for the development of a dye formula

dip, noun

<washing machine> depth of liquid in the inner cylinder of a rotary washing machine

dip, verb

immerse a textile in a liquid for a relatively short period of time

direct dye

anionic dye that has **substantivity** for cellulosic **fibres**, and that is normally applied from an aqueous dyebath containing an electrolyte

direct spinning

<bast fibre production> method of **dry spinning** bast **fibres** whereby un-twisted **slivers** are drafted with suitable controls and directly twisted into **yarn**

direct spinning

<**manufactured fibre** production> integrated polymerization and fibre **extrusion** without intervening isolation or storage of the polymer

direct spinning

<**manufactured fibre** yarn production> process whereby **tow** is converted to **staple fibre** and spun into **yarn** in an integrated operation

direct spinning

<short-staple yarn production> production of **yarn** directly from card **sliver**

direct warping

transference of yarn from a package creel directly onto a beam
cf. **section warping**

discharge printing style

localized chemical removal, decolorization, or discharge, of **dye** on dyed **fabric** by transfer of discharging agent(s) from a thickened paste, which results in a design that is either a coloured discharge (if the paste contains a dye resistant to the discharging agent) or white (if no other dye is present)

disperse dye

substantially water-insoluble **dye** that has **substantivity** for one or more hydrophobic **fibres**, for example cellulose acetate, and that is usually applied from fine aqueous dispersion

dispersion

SEE under **fibre length**

dispersion spinning

process in which polymers that tend to an infusible, insoluble and generally intractable character (for example polytetrafluoroethylene) are dispersed as fine particles in a carrier such as sodium alginate or sodium cellulose xanthate solutions, which permits **extrusion** into **fibres**, after which the dispersed polymer is caused to coalesce by a heating process, the carrier being removed either by a heating or by a dissolving process

dobby

mechanism for controlling the movement of the **heald shaft** of a loom

NOTE A dobbie is used when the number of heald shafts or the number of picks in a repeat of the pattern (or both) are beyond the capacity of tappet **shedding**.

dobby fabric

fabric or **weave** which requires a **dobby**

doctor

SEE **doctor (blade)**

doctor (blade)

doctor knife

straight-edged blade mounted parallel to a moving surface, such as a printing roller or a **fabric**, to remove excess or unwanted applied materials

doctor knife

SEE **doctor (blade)**

doeskin fabric

five-end satin or other **warp-faced fabric** with **dress-face finish**

NOTE Other **weaves**, such as 2/1 warp **twill** and 3/1 broken crow, are very often used and given a dressed **finish**, and the name doeskin is applied. It is often the effect and the kid-glove **handle** due to the finish that cause such a fabric to be placed in the category of a doeskin. The fabric is all-wool, often all merino wool, or possibly blended wool including **merino wool**.

dogstitch check

SEE **houndstooth check**

donegal

plain-weave **fabric** woven from woollen-spun **yarns** characterized by a random distribution of brightly coloured flecks or **stubs** cf. note 2 to **woollen**

dope-dyeing

SEE **mass coloration**

double, verb

SEE **fold, verb**

double-braided ropeSEE under **rope**

double cloth, woven

SEE **woven double cloth****double-cylinder knitting machine**SEE under **knitting machine****doubled yarn**SEE **folded yarn****double-ended needle**SEE under **needle****double marl**SEE under **worsted yarn****double-needle-bar raschel warp knitting machine**SEE under **knitting machine****double roving spinning**

system in which two **rovings** are fed to each spindle of a ring frame so as to produce a pseudo-two-fold or 2-strand **yarn**
cf. **spinning**

double satin

warp-backed satin, frequently used for **ribbons**, with the backing ends stitched in **sateen** order to present a warp-satin surface on both sides of the **fabric**

DPSEE **degree of polymerization****drafting**

<spinning> process of **drawing out laps, slivers, slubbings, and rovings** to decrease the **linear density**

drafting

<warp preparation> order in which threads are drawn through **heald** eyes before **weaving**

drape

ability of a **fabric** to hang in graceful folds, for example the sinusoidal-type folds of a curtain or skirt

drape, surgical

SEE **surgical drape****drawing**

<staple yarn> operation by which **slivers** are blended, doubled, or levelled, and, by **drafting**, reduced to a sliver or a **roving** suitable for spinning

NOTE In short-staple spinning the term is only applied to the process at a drawframe. Various systems of **drawing** are practised in modern worsted spinning, but, with machinery development, and the greater use of manufactured **staple fibres**, the differences are becoming less distinct. Most modern worsted drawing sets comprise three passages of pin drafting and a roving process,
cf. **gilling**

drawing

<synthetic filaments and films> stretching to near the limit of plastic flow of synthetic **filaments** or films of relatively low molecular orientation

NOTE This process orientates the molecular chains in the direction of stretching.

drawing, cold
SEE **cold drawing**

drawing, hot
SEE **hot drawing**

drawing-in

process of drawing each thread of a **warp** beam through an eye of a **heald** and the dents of a **reed**

drawn yarn

extruded **yarn** that has been subjected to a stretching or **drawing** process to orientate the long-chain molecules of which it is composed

draw-spinning

process for spinning partially or highly oriented **filaments** in which the orientation is introduced before the first forwarding or collecting device

draw-texturing

process in which the **drawing** stage of synthetic **yarn** manufacture is combined with the texturing process

NOTE 1 The drawing and texturing stages could take place either in separate, usually consecutive, zones of a machine (sequential draw-texturing) or together in the same zone (simultaneous draw-texturing).

NOTE 2 The usual feedstock for simultaneous draw-texturing is **partially oriented yarn**.

dress-face finish

<wool **fabric**> **finish** characterized by a closely cropped surface and high **lustre**

drill

twill fabric of construction similar to that of a **denim**, but usually **piece dyed**

dry clean

remove grease, oil, and dirt from garments or **fabrics** by treating them in an organic solvent, as distinct from aqueous liquors

NOTE Examples of suitable solvents are tetrachloroethylene (perchloroethylene), white spirit and alternative hydrocarbons. The process was originally known as "French cleaning".

dry-jet wet spinning
cf. note to **wet spinning**

dry-laid nonwoven fabric

fabric made from a **web** or **batt** by **dry laying**, followed by any type of bonding process

dry laying

process for forming a **web** or **batt** of **staple fibres** by **carding** or **air laying**

dry spinning

conversion of a dissolved polymer into **filaments** by **extrusion** and evaporation of the solvent from the extrudate

duck

closely woven, plain-weave **fabric** similar to **canvas**, and usually made from cotton or linen **yarns**

NOTE The terms "canvas" and "duck" have become almost generic and are usually qualified by terms that indicate the use of the fabric, for example artist's canvas, belting duck.

duffel duffle

heavy low-grade **fabric**, napped on both sides, made from woollen **yarn**

duffle

SEE **duffel**

dull
lacking **lustre**

dungaree
3/1 or 2/1 **twill fabric** used for overalls, sometimes **piece dyed**

NOTE Better qualities are made from dyed **warp and weft yarns**.

durability
ability of a textile to perform its required function until an agreed upon limit is reached

durable finish
type of finish reasonably resistant to normal usage, and to normal washing or dry cleaning

durable press permanent press
finishing treatment designed to impart to a textile material or garment the retention of specific contours, including defined creases and pleats resistant to normal usage, and to normal washing or dry cleaning

NOTE The treatment could involve the use of a cross-linking agent, which could be applied and cured either before or after fabrication of a garment. In the case of textiles composed of heat-settable **fibres**, the treatment could involve high-temperature pressing.

dye
colorant, usually organic, soluble or dispersed in its medium of application and which is designed to be absorbed or adsorbed by, made to react with, or deposited within, a **substrate** in order to impart **colour** with some degree of permanence to that substrate

dye affinity
SEE **affinity**

dye-fixing agent
substance, generally organic, applied to a dyed or printed material to improve colour fastness

dyeing
application and fixing of a **dye** to a **substrate**, normally with the intention of obtaining an even distribution throughout the substrate cf. note to **wet processing**

NOTE In certain instances this term is used to describe processes resulting in non-uniform coloration, for example **space dyeing**, **tie-and-dye**.

easy-care finish (deprecated)
SEE **crease-resistant finish**

eccentric yarn
SEE under **fancy yarn**

edge crimping
cf. note 1(e) to **textured yarn**

edging
narrow fabric or strip of knitted **fabric**, **lace** or embroidery, attached to another fabric or made-up article by one edge, and usually used for decorative purposes
cf. **binding**

effective length
SEE under **fibre length**

8-strand plaited rope
SEE under **rope**

elastic fabric

fabric that contains rubber or other elastomeric **fibres** or threads and that has highly recoverable extensibility
cf. **stretch fabric**

elasticity

property of a material by virtue of which it tends to recover its original size and shape immediately after the removal of the force that causes deformation

elastic limit

greatest strain which a material is capable of sustaining without any permanent strain remaining after complete release of the stress

elastic narrow fabric

narrow fabric incorporating elastomeric **fibres**, which extend when stretched and recover their original dimensions when the stretching load is removed

NOTE Four principal types are

- a) elastic **web** or narrow woven elastic,
- b) elastic **braid**, flat or tubular,
- c) crochet-knit elastic, and
- d) narrow elastic **lace**.

elastic recovery

immediate reduction in extension observed in a material when, after the material has been held at a defined elongation for a given time, the applied force is removed

elastomer

polymer that has high extensibility together with rapid and substantially complete **elastic recovery**

NOTE 1 Most **fibres** formed from elastomers have breaking elongations in excess of 100 %.

NOTE 2 Elastomeric behaviour is usually strongly temperature dependent.

elastomeric yarn

yarn formed from an **elastomer**

NOTE Elastomeric yarn can either be incorporated into **fabric** in the bare state or be wrapped with relatively inextensible **fibres**. Wrapping is done by covering, core-spinning or **uptwisting**. cf. **core-spun yarn**, **covered yarn**

electrostatic flocking

process of applying **flock** to an adhesive-coated **substrate** in a high-voltage electrostatic field

elongation

increase in length of a specimen during a **tensile test**, expressed in units of length cf. **percentage extension**

emboss

produce a pattern in relief by passing **fabric** through a **calender** in which a heated metal bowl engraved with the pattern works against a relatively soft bowl built up of compressed paper or cotton on a metal centre

embossed crêpe

SEE under **crêpe fabric**

embroidery

decorative pattern superimposed on an existing **fabric** by machine stitching or hand needlework

end

<fabric> length of finished **fabric** less than a customary unit (piece) in length

end

<finishing> each passage of a length of **fabric** through a machine, for example in jig-dyeing

end

<joining> joint between **pieces** of **fabric** due, for example, to damage or short lengths

end

<spinning, braiding> individual **strand**

end

<weaving> individual **warp** thread

endless woven belting

SEE under **belting**

extension at break breaking extension percentage extension of a test specimen at breaking point

extension, percentage

SEE **percentage extension**

extrusion

process of forming **fibres** by forcing materials through orifices cf. note 2 to **spinning**

fabric

<textile material> manufactured assembly of **fibres** or **yarns** that has substantial surface area in relation to its thickness, and sufficient cohesion to give the assembly useful mechanical strength

NOTE Fabrics are most commonly woven or knitted, but the term includes assemblies produced by **felting**, lace-making, net-making, nonwoven processes, and tufting.

fabric face

side of a **fabric** which is intended to be the used surface or which is to be visible in an end product

fabric width

unless otherwise specified, the distance from edge to edge of a **fabric** when laid flat on a table without tension

NOTE When buying or selling fabric, it is normal to specify the basis on which the width is to be assessed, for example overall, within limits, or **usable width**.

faciated yarn

SEE under **fancy yarn**

faillie

fine, soft **fabric**, woven from **continuous-filament yarn**, made in a plain weave with weftwise ribs formed by the intersection of a fine, close-set **warp** with a coarser **weft**

false twisting

twisting operation applied at an intermediate position on a **yarn** or other continuous assembly of **fibres**, so that no net twist can be inserted, as distinct from twisting at the end of a yarn where real twist is inserted

NOTE 1 Real twist necessarily involves either rotation of a yarn end (as in **uptwisting** or **downtwisting**) or the repeated passage of a thread loop round an end, as in **two-for-one twisting**. In false twisting, a yarn normally runs continuously over or through a **false-twisting** device, which can act at either a constant or a varying rate. When the twisting rate is constant and equilibrium has been established, the yarn passes through a zone of added twist, then, on leaving the twisting device, returns to its original twist level. The added (false) twist level is equal to the ratio of the rotational speed of the yarn to the axial speed of the yarn, cf. **ring twisting**

NOTE 2 Equilibrium false twisting is used in one method of yarn texturing where thermal **setting** is carried out in the zone of temporary twist; it is also used to provide temporary cohesion and thus strength in some **staple-fibre** processes.

NOTE 3 Some devices that are usually used for false twisting have been used to generate real twist in, for example, certain **open-end spinning** processes.

false-twist texturing

cf. note 1 (a) to **textured yarn**

fancy yarn

yarn that differs from the normal construction of single and **folded yarns** by way of deliberately produced irregularities in its construction

bouclé yarn

loop yarn

compound yarn that consists of a twisted **core** with an effect yarn so wrapped round it as to produce wavy projections on the compound yarn

chenille yarn

yarn consisting of a cut **pile** which could be of one or more of a variety of **fibres** helically disposed round axial threads which secure it

cloud yarn

yarn using two threads of different colours in such a manner that each thread alternately forms the base and cover to "cloud" the opposing thread

corkscrew yarn

SEE **spiral yarn** under **fancy yarn**

eccentric yarn

undulating **gimp yarn**

NOTE Generally, it is produced by binding an irregular **yarn**, such as a stripe yarn or a slub yarn, in the direction opposite to that of the initial stage, to create graduated half-circular loops along the compound yarn.

faciated yarn

staple-fibre yarn that, by virtue of its manufacturing technique, consists of a **core** of essentially parallel **fibres** bound together by wrapper fibres and manufactured by **jet spinning**

flame yarn

yarn incorporating injected **slubs** which can be multicoloured, and characterized by the gradual thinning of the **linear density** of the slubs at both ends as they emerge from and then merge back into the support or ground yarn

flammé yarn

yarn coloured over short sections by printing, and intended for use in flamme **fabrics**

fleck yarn

mixture yarn of spotted and short streaky appearance, due to the introduction of a minority of fibres of different colour or lustre, or both

gimp yarn

yarn made from one or more **strands** twisted round a usually finer central ground yarn and overfed to form a clear spiral wrapping

knickerbocker yarn

knicker yarn

nepp yarn

yarn made on the **woollen carding** system and showing strongly contrasting spots on its surface that are made either by dropping in small balls of wool at the latter part of the **carding** process or by incorporating them in the blend and so adjusting the carding machine that these small lumps are not carded out

knicker yarn

SEE **knickerbocker yarn** under **fancy yarn**

knop yarn

yarn that contains prominent bunches of one or more of its component threads, arranged at regular or irregular intervals along its length

loop yarn
SEE **boucle yarn** under **fancy yarn**

nepp yarn
SEE **Knickerbocker yarn** under **fancy yarn**

slub yarn
yarn in which **slubs** are deliberately created to produce a desired effect

snarl yarn
compound yarn that displays snarls or kinks projecting from the **core**

spiral yarn
corkscrew yarn
plied yarn displaying a characteristic smooth spiralling of one component round the other

stripe yarn
yarn that contains elongated knops
cf. **knop yarn** under **fancy yarn**

FBA
SEE **fluorescent brightening agent**

FDY
SEE **fully drawn yarn**

feeler motion
mechanical device used to detect when the **weft** on a **pirn** in a **shuttle** is becoming exhausted

fell
<cloth> line of termination of the **fabric** in the loom formed by the last **weft** thread

felling, simili
SEE **simili binding** under **binding**

felt
textile **fabric** characterized by the entangled condition of many or all of its component **fibres**

NOTE Three classes of felt can be distinguished:

- a) pressed felt (mechanical or sheet felt), which is formed from a **web** or **batt** containing animal hair or wool, consolidated by the application of moisture, mechanical action and heat, which causes the constituent fibres to mat together;
- b) woven or knitted felts formed from **staple-fibre** fabrics with some wool or animal hair content. These are subjected to the processes identified in (a) to such a degree that the original fabric construction is completely obscured by the smooth felted surface; and
- c) **needlefelt**.

felting
matting together of wool or other animal **fibres** with a pronounced surface scale structure, either during processing or in use cf. **felt**, **milling**

FIBC
SEE **flexible intermediate bulk container**

fibre
textile raw material, generally characterized by flexibility, fineness and high ratio of length to thickness

chemical fibre
SEE **manufactured fibre** under **fibre**

man-made fibre

SEE **manufactured fibre** under **fibre**

manufactured fibre

chemical fibre

man-made fibre

fibre that does not occur in nature

NOTE 1 The material of which it is composed might occur naturally,
cf. **natural fibre** under **fibre**

NOTE 2 The raw materials for the manufacture of fibres can be derived from

- a) naturally occurring, non-fibrous materials, such as metal fibres from a variety of metals and their ores, and glass fibre from silica and other minerals;
- b) natural polymers, for example rubber fibre from latex, viscose from wood cellulose, and azlon from natural proteins;
cf. **regenerated fibre** under **fibre**
- c) synthesized polymers such as the polyamides and polyesters; and cf. **synthetic fibre** under **fibre**
- d) other manufactured fibres, which then undergo further significant physical or chemical modification, for example carbon fibre from acrylic or pitch fibres.

NOTE 3 Chemical fibre is a literal translation of various non-English terms.

natural fibre

animal (silk, wool), vegetable (cotton, jute) and mineral (asbestos) **fibres** occurring in nature

regenerated fibre

fibre formed from a solution of a natural polymer, or from a solution of a chemical derivative of a natural polymer that has the same chemical constitution as the natural polymer from which the solution or derivative was made

synthetic fibre

fibre manufactured from a polymer synthesized from chemical elements or compounds, in contrast to fibres made from naturally occurring fibre-forming polymers

fibre diagram

SEE under **fibre length**

fibre extent

SEE under **fibre length**

fibre fineness

<animal **fibres**> fineness expressed as the mean fibre diameter

fibre fineness

<cotton, silk and **manufactured fibres**> fineness expressed in terms of average **linear density**

fibre length

distance between the ends of a **fibre** when it is measured under specified conditions

crimped length

distance between the ends of a **fibre** when it is substantially freed from external restraint, measured with respect to its general axis of orientation

dispersion

measure of length variation in cotton **fibres**

NOTE Statistically it is the inter-quartile range of the fibres greater than half the maximum length when determined using a comb sorter.

effective length

measure of the characteristic length of cotton **fibres** determined by a series of approximations made on the **fibre diagram**

fibre diagram**staple diagram**

graphical representation of the length characteristics of a sample of **staple fibres**

fibre extent

distance between two planes which just enclose a **fibre** without intercepting it, each plane being perpendicular to the general direction of the **yarn** or other assembly of which the fibre forms a part

short fibre content

<cotton, wool> percentage, by number or mass, of **fibres** shorter than a certain specified length, in a given sample of fibres

NOTE For cotton, the specified length is generally 12.7 mm (half inch). For wool, it is typically 25 mm or 40 mm.

staple, noun

SEE **staple (length)** under **fibre length**

staple diagram

SEE **fibre diagram** under **fibre length**

staple (length)

characteristic **fibre length** of a sample of **staple fibres**

NOTE 1 In the case of **natural fibres**, this is usually estimated by subjective visual assessment.

NOTE 2 The staple length of wool is usually taken as the length of the longer **fibres** in a hand-prepared tuft in its naturally crimped and wavy condition. The staple length of cotton corresponds very closely to the modal or most frequent length of the fibres when they are measured in a straightened condition.

fibril

<bicomponent fibre> fine, fibre-like element embedded within a **fibre** and usually consisting of a different material to its matrix

cf. matrix-fibril bicomponent fibre under **bicomponent fibre**

fibril

<generic> small, fine **fibre**

fibril

<morphology> structural subunits of **fibres**, formed from bundles of linear polymer molecules in crystalline or semi-crystalline organization

fibrillated yarn**split film****split tape**

yarn produced by the process of **fibrillation**

fibrillating film

polymer film in which molecular orientation has been induced by stretching to such a degree that it is capable of being converted into **yarn** or twine by manipulation (for example by twisting under tension or by rubbing laterally), which results in the formation of a longitudinally split structure

fibrillation

process of splitting a longitudinally oriented **fibre, textile film or tape** into a network of interconnected fibres

fibril-matrix bicomponent fibre

SEE **matrix-fibril bicomponent fibre** under **bicomponent fibre**

filament

fibre of indefinite length

filament blend yarn
biconstituent yarn
co-spun yarn

filament yarn containing separate **filaments** of two distinct types, the filaments being more or less randomly blended over the cross section of the **yarn** cf. **bicomponent yarn**

filament yarn
SEE (continuous-)filament yarn

filet net
SEE (woven) filet net

filler
SEE filling

filling
filler

<finishing> generally insoluble materials, such as China clay and gypsum, added to **fabrics** together with starches, gums or polymers during finishing to add mass or to modify their appearance and **handle**, or both
cf. **weighting**

NOTE This term is usually applied only to cellulosic textiles. **Finishes** in which starches or gums are used without the addition of insoluble materials are sometimes referred to as "fillings", but are more correctly described as "assisted finishes".

filling
filler
<weaving> weft yarns

film release
cf. note to **transfer printing**

finish, noun
<additive> substance or mixture of substances added to a **substrate** at any stage in the process to impart desired properties

finish, noun
<process> physical or chemical process applied to a **substrate** to produce a desired effect

finish, noun
<property> properties, such as smoothness, drape, **lustre**, gloss and crease resistance, produced by adding a substance or by a chemical or physical process, or both

finish, verb
apply or produce a **finish**

finishing
cf. note to **wet processing**

fire retardant
substance added, or a treatment applied, to a material in order to suppress, significantly delay or reduce combustion

flame resistance
flame retardance
property of a material whereby flaming combustion is slowed, terminated or prevented

NOTE Flame resistance can be an inherent property of the basic material or it can be imparted by specific treatment. The degree of flame resistance exhibited by a material during testing can vary with test conditions.

flame retardance
SEE **flame resistance**

flame yarnSEE under **fancy yarn****flammé**<woven cellulosics> plain-weave **fabric** produced from yarn-dyed linen **warp** and cotton **weft**, used for tablecloths and curtains**flammé**<woven wool> dress **fabric** made from printed **yarns****flammé yarn**SEE under **fancy yarn****flannel**all-wool **fabric** of plain or **twill weave** with a soft **handle** that could be slightly milled and raised**flannelette****fabric** made from cotton **warp** and soft-spun cotton **weft**, the fabric being subsequently raised on both sides to give an imitation of the true woollen **flannel**NOTE 1 It could be woven **grey** and dyed or printed, or it could be woven from dyed **yarns**.NOTE 2 **Fibres** other than cotton are sometimes present in the **weft yarn**.**flash spinning**modification of the **dry-spinning** method in which a solution of a polymer is extruded at a temperature well above its boiling point, such that, on its emergence from the **spinneret**, evaporation occurs so rapidly that the individual **filaments** are disrupted into fine **fibrils****flat knitting machine**SEE under **knitting machine****flat metal yarn****yarn** consisting of one or more continuous lengths of metal strip or yarn incorporating one or more continuous lengths as a major component

NOTE 1 A notable example is a single metal yarn in banknotes.

NOTE 2 Twist inserted in flat metal yarns might form irregular facets which reflect light accordingly to give decorative effects in **fabrics**.cf. **metallized yarn****flat yarn**

<monofilament yarn>

SEE **straw yarn****flat yarn**<multifilament yarn> untextured multifilament yarn with a very low level of twist or of intermingling, sufficient only to maintain **yarn** coherence**flax line**SEE **line flax****flax tow**short **fibres** produced by **scutching** or **hackling****fleck yarn**SEE under **fancy yarn****fleece wool**

wool shorn from a living sheep

flexible intermediate bulk container

FIBC

fabric container used for transporting and storing quantities (approximately 1 t to 5 t) of bulk commodities, such as powders and granular material

NOTE The containers are characterized by webbing or fabric lifting loops that enable them to be handled mechanically by crane or forklift. The containers can be made of coated or uncoated woven **fabric**, and can be fitted with an inner liner made of polymer film and filling and with emptying tubes. Uncoated fabrics are normally constructed from **tape yarns** woven at high **sett** to give a fabric of low permeability.

flexural rigidity

measure of the resistance of materials to bending by external forces

NOTE Flexural rigidity is related to stiffness and is one of the factors sensed when a **fabric** is handled.
cf. **stiffness**

flock

material obtained by reducing textile **fibres** to fragments by, for example, cutting, tearing or grinding

coating flock

cut or ground **fibres** used for application to **yarn**, **fabric**, paper, wood, metal or wall surfaces prepared with an adhesive

stuffing flock

fibres in entangled small masses or beads, usually of irregular broken fibres, obtained as a byproduct from, for example, milling, cropping, or **raising** of wool **fabric**, and mainly used for stuffing, **padding** or upholstery

flock printing

method of fabric ornamentation in which the **fabric** is printed with an adhesive, after which finely chopped **fibres** are applied all over by dusting, by air-blasting, or by electrostatic attraction

NOTE The fibres only adhere to the printed areas and are fixed by curing of the adhesive. Any loose fibres are removed from the imprinted areas.

florentine

heavy **grey** woven 3/1 **twill** cotton **fabric**, used for overalls and uniforms, and that has approximately 38 ends of 37 tex cotton yarn per centimetre and 19 picks of 49 tex cotton yarn per centimetre

fluidity

ease with which a fluid flows

NOTE 1 Fluidity is numerically the reciprocal of **viscosity**.

NOTE 2 The fluidity of dilute solutions of polymers is inversely related to the polymer molecular mass and, for certain fibre-solvent systems, can be used as an indicator of polymer degradation.

fluorescent brightening agent

FBA

fluorescent whitening agent

FWA

OBA

optical brightening agent

substance that, when added to a **substrate**, increases the apparent reflectance in the visible region by converting ultraviolet radiation into visible light and so increases the whiteness or brightness

fluorescent whitening agent

SEE **fluorescent brightening agent**

fluorocarbon finish

SEE **fluorochemical finish**

fluorochemical finish

fluorocarbon finish

polymeric **finish** containing combined fluorine applied to the surface of textile materials to confer, for example, water and oil repellency, and improved soil and stain release properties

flyer spinning

spinning system in which **yarn** passes through a revolving flyer leg guide and onto the package

NOTE The yarn is wound on by the flyer and spinning package being made to rotate at slightly different speeds.
cf. **spinning**

foam bonding

method of making **nonwoven fabrics** in which a fibre **web** or **batt** is treated by the application of a foamed adhesive material

cf. **adhesive-bonded nonwoven fabric**

fold, verb

double, verb

ply, verb

twist, verb

<yarn> combine by twisting together two or more **single yarns** to form a **folded yarn**

folded yarn**doubled yarn****plied yarn**

yarn in which two or more **single yarns** are twisted together in one operation, for example two-fold yarn and three-fold yarn

NOTE In some sections of the textile industry, such as the marking of handknitting yarns, these yarns are referred to as 2-ply, 3-ply, etc.

footing

SEE **tab**

FOY

SEE **fully drawn yarn**

Frauchiger method

cf. note to **space dyeing**

fraying

unravelling of **yarns** from the raw edge of **fabric**, which results in the projection of short, loose lengths

French cleaning

cf. note to **dry clean**

friction calendering

process of passing **fabric** through a **calender** in which a highly polished, usually heated steel bowl rotates at a higher surface speed than the softer bowl against which it works, thus producing a glaze on the face side that is in contact with the steel bowl

friction spinning

method of **open-end spinning** which uses two surfaces moving in opposing directions to insert twist into an assembly of **fibres** positioned between them

friction twisting

generation of false twist by a device in which the **yarn** lies in contact with one or more surfaces of high friction driven in a direction at a substantial angle to the yarn axis

cf. **false twisting**

fringe

<made-up articles> edging or border of loose threads, tassels or loops

fringe

<narrow fabric> trimming that has, on one or both edges, cut or looped **weft** threads, which extend substantially beyond the width of the warp **threads** to form a decorative edge

fulling

SEE **milling**

fully drawn yarn

FDY

FOY

fully oriented yarn

highly oriented yarn

HOY

melt-spun **continuous-filament yarn** that has been highly oriented either by **drawing** at a high draw ratio or by spinning at a high wind-up speed so that little residual drawability remains

fully oriented yarn

SEE **fully drawn yarn**

fusible interlining

interlining incorporating a thermoplastic resin so that it can be bonded to a garment part by the action of heat and pressure

fustian

hard-wearing type of clothing **fabric** that contains a large amount of **weft yarn**

fuzzing

roughening of the surface **fibres** of, or teasing out of fibres from, a **fabric**, which produces an unwanted change in appearance

fuzzy mote

SEE under **mote**

FWA

SEE **fluorescent brightening agent**

gaberdine

firmly woven, clear-finished, **warp-faced fabric** in which the end density considerably exceeds the pick density, the **twill** line thus being produced at a steep angle

gait, noun

<weaving> full repeat of the draft in the **healds** or, in the case of **jacquard**, full repeat of the draft in one complete row of the harness

gait, verb

SEE **gait(-up)**, verb

gait(-up), verb

<weaving> position the **warp, healds, and reed** in a loom, in readiness for **weaving**

gauge

<knitting machines> spacing of the loop-forming elements expressed as the number of elements per unit length

NOTE When the term is used with reference to a knitted **fabric** or garment, it usually denotes the gauge of knitting machine on which it was made.

gauge

<loop-forming elements> physical dimensions, usually thickness

gauge length

<testing> original length of that portion of the specimen over which strain or change of length is determined

gauze

fine, lightweight, open-texture **fabric** produced in plain weave or in a simple leno **weave**
cf. note 1 to **leno weaving**

gear crimping
cf. note 1(f) to **textured yarn**

generic name

<fibres> name used for regulatory purposes to distinguish one class of textile **fibres** from other classes

NOTE 1 For natural fibres the distinguishing attribute is the fibre source; for manufactured fibres a chemical difference, which often results in distinctive property differences, is the main basis for classification; other attributes are included where necessary. The attributes used for the specification of generic names of manufactured fibres are not necessarily identical with the attributes used for naming chemical molecules,
cf. **natural fibre and manufactured fibre** under **fibre**

NOTE 2 SANS 2076 contains a list of the generic names and definitions of the different categories of fibres manufactured on an industrial scale for textile and other purposes.

NOTE 3 SANS 6938 contains a list of the generic names and definitions of the different categories of natural fibres.

geomembrane

barrier of very low permeability, which might or might not incorporate textile reinforcement, and used to control the flow of fluids

georgette

fine, lightweight, open-texture **fabric**, usually in a plain weave, made from crêpe yarns, usually with two **S-twist** and two **Z-twist yarns** occurring alternately in both **warp** and **weft**

geotextile

permeable textile material used for filtration, drainage, separation, reinforcement and stabilization purposes as an integral part of civil engineering structures of earth rock or other constructional materials

gilding

SEE **oxidized oil staining**

gilling

pin drafting

system of **drafting** in which the movement of the **fibres** relative to one another in a **sliver** is controlled by pins

gimp

<cordage> **core** helically wrapped by one or more threads, resulting in a stiff **cord**

gimp

<upholstery trimming> trimming made wholly or partly from stiff **cord**

gimp yarn

SEE under **fancy yarn**

gingham

plain-weave, lightweight cotton **fabric**, approximately square in construction, in which dyed **yarns**, or white and dyed yarns, form small checks or, less frequently, narrow stripes

ginning

process that removes cotton **fibres (lint)** from the cotton seed

glacé binding

SEE under **binding**

glaze, verb

produce a smooth, glossy, plane surface on a **fabric** by heat, heavy pressure, or friction

grandrelle yarn

2-ply **yarn** composed of **singles** of different colours or of contrasting **lustre**

gray
SEE **grey**

Grecian honeycomb
cf. **note (c)** to **honeycomb**

greige
SEE **grey**

grey
gray
greige
descriptive of textile products before they are wet processed, for example bleached, dyed, printed or finished
cf. **loomstate**

grey scale
series of pairs of neutrally coloured chips that show increasing contrast within pairs, and used visually to assess contrasts between other pairs of patterns

NOTE 1 The ISO grey scales comprise two series of chips against which the magnitude of the change in colour of a specimen submitted to a fastness test and the magnitude of staining of adjacent uncoloured material can be visually assessed and rated on a scale of 1 to 5.

NOTE 2 See SANS 105-A02 and SANS 105-A03.

grist
SEE **count of yarn**

grosgrain
plain-weave **fabric** with a rib in the weft direction

NOTE The rib is more pronounced than in a **taffeta**, **poult** or **faille**, usually made from a close-set continuous-filament warp and coarse-folded continuous-filament or staple **weft**.

guide bar
<**warp knitting machine**> bar that runs the full width of a machine and that is equipped with guides through which threads are passed so that the lateral motions imparted to the guide bars by the pattern control device are transmitted to the threads

NOTE In warp knitting, the term "bar" is also used to define either the number of guide bars in the machine or the number of guide bars used to make a particular construction, for example 2-bar tricot machine, or 3-bar velour **fabric**.

guipure lace embroidery
lace construction produced by a pattern of thread embroidery temporarily connected to a ground **fabric**, the ground fabric being thereafter removed by chemical or other means, to leave an openwork lace

gut thread
thread incorporated in a woven, knitted or braided structure, primarily for the purpose of limiting the extension of the structure

hackling
combing process in which hanks of scutched flax are combed from end to end to remove short **fibres**, **naps**, non-fibrous material and seeds, and to subdivide and parallelize the fibre **strands** to produce **line flax** (long fibres) and **flax tow**

hair
animal **fibre** other than sheep's wool or silk

NOTE It is recognized that this definition implies a distinction between sheep's wool and the covering of other animals, notwithstanding the similarity in their fibre characteristics. Thus the crimped form and the scaly surface are not confined to sheep's wool. It seems desirable in the textile industry, however, to avoid ambiguity by confining the term "wool" to the covering of sheep and to have available a general term for other fibres of animal origin. Normally the less widely used fibres are known by name, such as alpaca and mohair, but collectively they should be classed as hair. A difficulty arises when it is desirable to distinguish between the fibres of the undercoat and the remainder of the fleece;

for instance, between the soft short camel hair used for blankets and the coarse long camel hair used for **belting**. The term "wool" is sometimes used for the shorter fibre, qualified by the name of the animal, for example "cashmere wool".

haircloth

<generic> **fabric** produced from **yarns** in which horsehair is mixed with cotton, polyester, linen or other **fibres** to make it strong and inflexible

haircloth

<interlining and furnishing fabric> **fabric** in which the **weft** consists of single **fibres** of horsehair, obtained from tails and manes and woven on a special loom which is capable of inserting picks of the discontinuous fibres

NOTE The fabric width is governed by the length of available horsehair and normally varies between 47 cm and 76 cm. The woven structure, which usually has a cotton **warp**, varies according to the end-use, for example **interlinings** and furnishing fabrics, and the horse hair can be dyed.

haircord

plain-weave cotton **fabric** characterized by fine rib lines in the **warp** direction created by alternate coarse and fine ends, or by having two (or more) ends **weaving** as one alternately with a single end

half-marl

SEE under **worsted yarn**

halo

cf. note to **sweating**

hand

SEE **handle**

hand-knotted carpet

carpet made by knotting tufts round the **warp yarn(s)** during hand **weaving**

handle

hand

quality of a **fabric** or **yarn** assessed by the reaction obtained from the sense of touch and concerned with the judgement of roughness, smoothness, harshness, pliability, thickness, etc.

hank

reel

skein

unsupported coil composed of wraps of **yarn** or **sliver** and wound on a reeling machine with a cross-wound pattern that allows the resulting assembly of **strands** to be leased

hard-laid rope

SEE under **rope**

hard waste

cf. note to **waste**

Harris Tweed

virgin wool tweed that is handwoven, dyed and finished in Scotland

hawser-laid rope

SEE under **rope**

headband

woven **narrow fabric** used in bookbinding, and that has a coloured piped or "beaded" edge woven integrally

heald

heddle

looped **cord**, shaped wire, or flat steel strip with an eye in the centre through which a **warp yarn** is threaded so that its movement can be controlled during **weaving**

heald frame

rectangular frame used to hold wire **healds** made of flat steel strips in position

NOTE Loops or holes at each end of the healds enable them to be placed upon the bars across the frame and to slide on these bars.

heald shaft

heald frame complete with **healds**

heat setting

SEE **setting**

heddle

SEE **heald**

helical selvedge

SEE **twist selvedge under selvedge**

herringbone

<fabric> **fabric** made in a **herringbone weave**

herringbone weave

combination of **twill weaves** in which the direction of the **twill** is reversed (usually by drafting) to produce stripes resembling herring bones

hessian

burlap

plain cloth made from **single yarns** of approximately the same **linear density** in **warp and weft**

NOTE The single yarns are usually made from bast **fibres**, particularly jute.

high-bulk yarn

SEE **bulked yarn**

highly oriented yarn

SEE **fully drawn yarn**

high-speed spinning

melt spinning process in which **filaments** are drawn from the **spinneret** and collected at high speeds
cf. **fully drawn yarn, partially oriented yarn**

NOTE Speeds above about 3 000 m/min are currently classed as high.

high-temperature dyeing

HT dyeing

dyeing at high pressure (i.e. pressure above atmospheric pressure) in order to dye at a temperature above the normal boiling point

holland

SEE **holland (cloth)**

holland (cloth)

plain, medium-weight cloth of cotton or linen with a **beetled finish** or a glazed **finish**, and used chiefly for window blinds, **interlinings** and furniture covering

NOTE Holland cloth was originally a fine, plain-weave **linen fabric**, made in many European countries, but especially in Holland.

hollow fibre

hollow filament

tube-like **manufactured fibre or filament**

hollow filament

SEE **hollow fibre**

hollow-spindle spinning**wrap spinning**

system of yarn formation in which the feedstock (**sliver or roving**) is drafted and the drafted twistless **strand** is wrapped with a **yarn** as it passes through a rotating hollow spindle
cf. **spinning**

NOTE The technique can be used for producing a range of **wrap-spun yarns** or **fancy yarns**, by feeding different yarn and **fibre** feedstocks to the hollow spindle at different speeds.

homespun

coarse handwoven 2/2 **twill-weave fabric** of tweed character

honeycomb

<fabric> **fabric** in which the **warp and weft** threads form ridges and hollows, which give a cellular appearance

NOTE Three types of **weave** produce this effect:

- a) ordinary honeycomb, which gives a marked cellular effect on the face and back of the cloth;
- b) Brighton honeycomb, which develops the effect more prominently on the face side but in a less regular manner and with large and small cells; and
- c) Grecian honeycomb.

hook-and-loop fasteners

SEE **touch and close fasteners**

hopsack

fabric made in a **hopsack weave**

hopsack weave**basket weave****matt weave****mat weave**

modification of plain weave in which two or more ends and picks weave as one

hosiery knitting machine

SEE under **knitting machine**

hot drawing

<synthetic filaments and films> **drawing of filaments** or films with the intentional application of external heat

hot-fluid jet-texturing

cf. note to **BCF yarn**, note 1(c) to **textured yarn**

hot mercerization

SEE under **mercerization**

houndstooth check**dogstitch check**

small **colour-and-weave effect in a fabric** produced by a combination of 2/2 **twill weave** and a 4 and 4 order of colouring in **warp and weft**

HOY

SEE **fully drawn yarn**

HT dyeing

SEE **high-temperature dyeing**

huckaback

fabric made in huckaback weave

huckaback weave

weave used principally for towels and glass-cloths in which a rough-surface effect is produced on a plain-ground texture by short floats, **warp** on one side and **weft** on the other

hue

attribute of colour whereby it is recognized as being predominantly red, green, blue, yellow, violet, brown, etc.

hydroentangled fabric

spunlaced fabric

nonwoven fabric made from a fibre **web** or **batt** in which entanglement by high-pressure water jets provides the bond

immature fibre

<cotton> **fibre** in which a little fibre wall thickening has taken place during cotton growth

cf. **maturity**

impact texturing

cf. note 1(d) to **textured yarn**

industrial and mechanical belting

SEE **belting**

industrial textile

category of **technical textile** either used as part of an industrial process, or incorporated into final products

ingrain

SEE **mixture** under **worsted yarn**

ink-jet printing

SEE **jet printing**

insect-resistant treatment

SEE **mothproofing**

interlaced yarn

cf. note 1 to **intermingled yarn**

interlining

fabric used between the inner and outer layers of a garment to improve shape retention, strength, warmth or bulk, and that can be of woven, knitted, or nonwoven material produced with or without a fusible adhesive coating

intermingled yarn

multifilament yarn in which cohesion is imparted to the filament bundle by the **filaments** being entwined instead of or in addition to being twisted

NOTE 1 Some manufacturers describe such a product as "interlaced yarn".

NOTE 2 Intermingling should be distinguished from air-texturing in which a much higher level of entanglement is achieved with the objective of producing texture or bulk,
cf. **textured yarn**

islands-in-the-sea bicomponent fibre

SEE under **bicomponent fibre**

jaconet

lightweight, plain-weave cloth of a lawn or muslin type with a smooth and slightly stiff **finish**

jacquard

<generic> patterning device and mechanism used to select individual **warp** threads in **weaving** or **warp knitting**, individual threads in **lace making**, and **knitting elements** in **weft knitting**

NOTE 1 Jacquard control can be by pegged card, punched card, punched tape, etc, or by electronic means.

NOTE 2 Named after the inventor, Joseph Marie Jacquard, 1752-1834.

jacquard card

SEE **jacquard (punched) card**

jacquard election mechanism

<knitting> system used to select **knitting elements** to produce **jacquard** designs

NOTE 1 Originally the term referred only to jacquard punched card and **jacquard harness** mechanisms.

NOTE 2 In **warp knitting**, the term generally refers to a device for selecting individual guides within a guide bar.

jacquard fabric

fabric in which a large number of **warp** threads, in excess of the capacity of a **dobby**, weave differently and therefore require a **jacquard mechanism**

jacquard harness

<weaving> series of **cords** and their attachments, from the hooks of a **jacquard mechanism** downwards, that control the lifting of the **warp** threads

NOTE The main parts include neck cords, couplings for the main cords that pass through the comber board, wire **healds** and **lingoes**. For high-speed weaving, lingoes are being replaced by elastics or springs.

jacquard mechanism

<weaving> **shedding** mechanism, attached to a loom, that gives individual control of up to several hundred **warp** threads and thus enables large figured designs to be produced

jacquard (punched) card

punched card used to control a **jacquard mechanism**, a series of which, strung together, control the production of the required pattern

jaspé

jasper

fabric that has a shaded appearance created by a **warp** thread colour pattern and that is woven plain or figured, and used for bedspreads or curtains

jasper

SEE **jaspé**

jaw break

failure of a specimen, during a **tensile test**, at the edge of the jaw or within 5 mm of its edge

J-box

upright J-shaped vessel for the continuous steaming or wet processing of textiles

jean

2/1 **warp-faced twill fabric** used chiefly for overalls or casual wear

jet-dyeing machine

<fabric dyeing> machine for dyeing **fabric** in rope form and in which the fabric is carried through a narrow throat by dye-liquor circulated at high velocity

jet-dyeing machine

<garment dyeing> machine for dyeing garments, and in which the garments are circulated by jets of liquid rather than by mechanical means

jet loom

jet weaving machine

power-operated **single-phase weaving machine** in which the **weft yarn** is propelled through the **shed** by a jet of air or liquid

cf. **air-jet loom**, **weaving machine**

jet printing

ink-jet printing

non-contact method of building up a coloured design on any textile surface, for example flat or **pile**, by ink droplets supplied from ink reservoirs to an array of jets

NOTE The jets are computer controlled and the droplets are formed either intermittently on demand by electromagnetic valves (drop-on-demand system), or continuously as a charged stream. In the latter system, unused inks are recycled back to the ink reservoirs. The textile jet systems use specially formulated inks that contain conventional **dyes**, which require fixing and washing off.

jet spinning

air-jet spinning

system of **staple-fibre** spinning which utilizes an air vortex to apply the twisting couple to the **yarn** during its formation

jet-textured yarn

SEE **textured yarn**

jet weaving machine

SEE **jet loom**

jig

jigger

machine in which **fabric** in open width is transferred repeatedly back and forth from one roller to another and which passes each time through a dyebath or other liquid of relatively small volume

jigger

SEE **jig**

karakul

<animal> type of sheep in Africa that produces a coarse wool, used mainly in carpets

karakul

broadtail

<wool> grade of lambskin (originally from Bokhara in Central Asia) with lustrous black hair which develops an attractive wavy pattern and is less curled than astrakhan

NOTE The lambskin is also known as "caracul" or "broadtail".

KDK texturing

cf. note 1(g) to **textured yarn**

kemp

coarse animal **fibres** with a wide lattice-type medulla, and that are shed from the skin at least once a year

kermantel

rope with a braided sheath and a **core** so constructed as to possess high extension and energy absorption under load, and used in rock climbing and related activities to arrest the accidental fall of a climber with an appropriate deceleration

kersey

compact, lustrous, woollen **fabric**, diagonally ribbed or twilled, and that is heavily milled and finished with a short nap

NOTE Kersey is similar to **melton**.

kick tape

trouser binding

narrow **fabric**, often **Paris binding**, used on trouser leg bottoms

kier boiling

kiering

process of prolonged boiling of cotton or flax materials with alkaline liquors in a large steel container known as a kier, either at or above atmospheric pressure

kieringSEE **kier boiling****Knickerbocker yarn**SEE under **fancy yarn****knicker yarn**SEE **knickerbocker yarn** under **fancy yarn****knit-deknit**cf. note to **space dyeing**, note 1 (g) to **textured yarn****knitting**process of forming a **fabric** by the intermeshing of loops of **yarn**cf. **warp knitting**, **weft knitting****knitting elements**<generic> loop-forming parts of a knitting machine that are in direct contact with the **yarn** and that control or select the loop-forming instruments**knitting machine**machine for the production of **fabrics** and garments by **warp knitting** or **weft knitting**NOTE 1 The different types of **warp knitting machines** and **weft knitting machines** are classified and named, primarily, according to

- a) the type of fabric or garment they are intended to produce,
- b) the type of needle used,
- c) the form, arrangement and activation of their needles or needle beds,
- d) the type of patterning control used, and
- e) whether they are hand-operated or power-operated.

NOTE 2 There are no convenient English terms to distinguish between machines in which the individual needles operate independently (German, Strickmaschine), and machines in which the needles are mounted so that they must be operated in unison (German, Wirkmaschine), although this distinction forms the basis of classifications of knitting machines.

circular weft knitting machine

knitting machine in which the needles are set radially or in parallel in one or more circular beds

NOTE Machines of diameter less than 165 mm are often termed "small-diameter circular weft knitting machines".

crochet-knitting machine**warp knitting machine** using latch or carbine needles and generally mounted horizontally, in a needle bed

NOTE The fabric is removed at 90° to the needles' movement (vertically downwards) and is controlled by the top of the needle bed and a special bar placed in front of the fabric.

cylinder-and-dial knitting machine**circular weft knitting machine** in which knitting is carried out on two sets of needles, one set being mounted vertically and in parallel round a needle cylinder and the other mounted horizontally and radially on a dial, concentric with the needle cylinder**double-cylinder knitting machine****circular weft knitting machine** with two cylinders, one superimposed above the other and equipped with one set of double-ended needles that can be caused to knit in either cylinder as required to make plain, rib or purl structures**double-needle-bar raschel warp knitting machine****warp knitting machine** with two vertically operating needle bars and a number of guide bars

NOTE The fabric, which is drawn down between the needle bars, can be double faced.

flat knitting machine

weft knitting machine with straight needle beds and carrying independently operated latch needles

NOTE 1 Rib machines (V-type) usually have two needle beds, which are opposite each other in an inverted-V formation.

NOTE 2 Purl machines usually have two needle beds horizontally opposed in the same plane.

NOTE 3 Reciprocating carriage flat knitting machines are usually provided with one or two carriages containing one, two, three or four cam systems that traverse to and fro across the needle beds.

NOTE 4 Circulating carriage flat knitting machines are flat knitting machines in which several carriages, each with its own cam system, move continuously across the needle beds in the same direction.

hosiery knitting machine

knitting machine for the production of hosiery

NOTE A hosiery knitting machine is usually a small-diameter latch-needle **circular weft knitting machine**.

loop wheel knitting machine

circular weft knitting machine in which knitting takes place on a set of vertically mounted **bearded needles**, the yarn being manipulated with the aid of bladed wheels

Milanese warp knitting machine

straight-bar or circular **warp knitting machine** specially constructed to knit Milanese **fabrics** by means of atlas-type lapping traverses with two sets of **warp** threads which move continuously in opposition without changing direction

multifeeder circular weft knitting machine

circular weft knitting machine with a multiplicity of feeders normally distributed evenly round the circumference of the cylinder or dial (or both) of the machine

NOTE Adjacent feeders supply yarn to successive courses in the fabric.

purl knitting machine

flat knitting machine or double-cylinder knitting machine with two aligned needle **tricks** and a set of double-headed needles which can knit in either of the two opposed needle beds under the control of sliders, permitting the production of purl **fabrics**

raschel warp knitting machine

warp knitting machine with one or two needle bars and employing either latch or compound vertically mounted needles in which the **fabric** is supported on either one or two **trick** plates and is withdrawn from the knitting zone in a downward direction

simplex warp knitting machine

double-needle-bar **warp knitting machine** using **bearded needles** mounted vertically, or nearly so, in which the **fabric** is supported and controlled by **sinkers** and is removed from the knitting zone in a downward direction

small-diameter circular weft knitting machine

cf. note to **circular weft knitting machine** under **knitting machine**

straight-bar knitting machine

weft knitting machine with **bearded needles** fixed in a movable straight bar or bars and used to produce fashioned or fully fashioned goods

tricot warp knitting machine

warp knitting machine generally using bearded or compound needles mounted vertically, or nearly so, in which the **fabric** is supported and controlled by **sinkers**

NOTE The fabric is removed from the knitting point at approximately 90° to the needles' movement (nearer the horizontal than the vertical).

warp knitting machine

knitting machine in which the **yarn** is fed to the **knitting elements** substantially in a longitudinal direction and in which the needles are mounted so that they operate in unison

weft knitting machine

knitting machine in which the **yarn** is fed to the **knitting elements** substantially in a horizontal direction and in which the individual needles operate independently

knitwear

weft-knitted outerwear garments such as pullovers, jumpers, cardigans and sweaters

knop yarn

SEE under **fancy yarn**

knotting

<generic> tying two **yarn** ends together

knotting

<weaving> tying the ends of a new beam to their corresponding ends on the old beam in the loom by hand or machine

lace

flat or tubular braided or woven **narrow fabric**

NOTE Lace is often cut into lengths and tagged for use as shoelaces and corset-laces.

ladder web

4-ply **narrow fabric** consisting of two outer or body **webs** between which are woven two narrower webs in staggered relationship with each other, each being woven alternately into one end and then the outer or body web, so as to form, when opened up, supports for the slats of the Venetian blind

laid rope

SEE under **rope**

lamé

fabric in which metallic threads are a conspicuous feature

laminated fabric

SEE **combined fabric**

lap

<fabric layer> individual layer of **fabric** in roll form

lap

<fabric length> length of **fabric** between successive transverse folds when **pieces** are plaited down or folded

lap

<flax> arrangement of the **fibre strands** in scutched flax pieced out for **hackling**, or in pieces of hackled flax to facilitate their removal as separate units from built-up bundles

lap

<generic> sheet of **fibres or fabric** wrapped round a **core** with specific applications in different sections of the industry

NOTE One example of a lap is sheets of fibre wound on rollers or round endless aprons to facilitate transfer from one process to the next.

lapped fabric

cf. note to **cuttle**, verb

LAQ

SEE **limit for acceptable quality**

lasting

very stout, closely woven **fabric** made from hard-twisted **yarns**

NOTE 1 Worsted lasting, usually a seven-shaft weave, is used for protective clothing in munitions works.

NOTE 2 Cotton lasting, which can be of sateen or weft-faced twill weave, is used chiefly for shoe tops and bag linings.

latch needle

SEE under **needle**

latent crimp

crimp that is potentially present in specially prepared **fibres or filaments** and that can be developed by a specific treatment such as thermal relaxation or tensioning and subsequent relaxation

lawn

fine, plain-weave cloth of linen or cotton, made in various fine, sheer qualities

NOTE Various **finishes** can be applied, in which case the product is known by the name of the finish used, for example **organdie**.

lay, noun

fabric placed in identical lengths, one on top of the other, in preparation for cutting before making-up

lay, verb

twist two or more components round each other to form a helix about the axis of the resulting laid product, which can be a **strand or a rope**

leader cloth

SEE **leader fabric**

leader fabric

leader cloth

length of **fabric** used in the finishing process or the dyeing process to lead goods through a machine, and generally left ready for attachment to a further **piece** of fabric when necessary

leather cloth

coated fabric which is embossed to give a leather-like appearance

leno edge

SEE under **selvedge**

leno fabric

fabric in which **warp** threads have been made to cross one another, between the picks, during **leno weaving**

NOTE The crossing of the warp threads could be a general feature of plain leno fabrics (as in marquisette and some **gauzes** and muslins) or could be used in combination with other **weaves** (as in some **cellular fabrics**).

leno weaving

form of **weaving** in which **warp** threads are made to cross one another between the picks

NOTE 1 The simpler types of lightweight **fabric** produced by this method of weaving are known as "**gauze**".

NOTE 2 In simpler leno weaving, one thread, generally called a crossing or leno end, is caused to lift alternately on one side and then on the opposite side of the other thread, usually referred to as the standard end so as to produce crossed or open **sheds**. If the standard end is lifted a plain shed is formed.

leuco dye

reduced form of a dye from which the original dye can be regenerated by oxidation

levelling

migration of dye leading to a more uniform coloration of a **substrate**

limbric

lightweight to medium-weight, closely woven, plain-weave cotton cloth made from good quality **yarns**, in which the weft is coarser and more closely spaced and has a lower twist factor than the **warp**, giving a soft cloth in which the weft predominates on both sides

limit for acceptable quality**LAQ**

number of defects permissible per 100 m² of fabric

linear density

number of mass units per defined length used to express, for example, **fibres**, **filaments**, **slivers**, **rovings** or **yarn fineness**
cf. **tex system**

line flax**flax line**

long flax **fibres** produced by **hackling**

linen article

article which, apart from adornments, is made from **yarns** spun from flax **fibres**

NOTE Despite some usage of this term in non-technical circles as a generic one, such as linen department, baby linen, household linen, it does not apply to individual articles that do not comply with the definition.

linen fabric

fabric woven from linen **yarns**

linen yarn

yarn spun entirely from flax **fibres**

lingerie ribbon

type of fine and soft **ribbon** suitable for use on ladies' underwear

lingoe

metal weight attached to the lower end of each **cord of a jacquard harness**

lining

material used to cover part or all of the inside of apparel or curtains, or the inside or back of other objects

linking looping

<knitting> method of joining together the edges of a **piece** or pieces of **fabric** by a single or a double chain-stitch on a **linking machine**, in which one or more of the pieces of fabric are run on to the points on a loop-to-point basis and are therefore stitched through adjacent needle loops

linking machine

<knitting> straight or circular machine, provided with grooved points spaced to receive knitted loops, which are then joined together by chain-stitch

lint

<fabric> plain-weave, highly absorbent material with one raised fleecy surface which, for surgical purposes, can be sterilized

lint

<fibre> main seed hair of the cotton plant

inters

whole and broken **lint** fibres and fuzz **fibres**, which are removed from cotton seeds recovered from the first **ginning** by means of one or more additional ginning processes

liquor ratio**LR**

ratio of the mass of liquor used in any treatment to the mass of material treated

lisle thread

highly twisted, plied (usually 2-ply), good quality cotton hosiery **yarn**, spun generally in fine counts

NOTE All lisle threads are gassed and some might be mercerized. A lisle thread was formerly a **plied yarn** with **singles** of opposite twist.

list

SEE **selvedge**

lively yarn

SEE **snarly yarn**

loading

increasing the mass of **fabrics** by the addition of deliquescent salts, starch, China clay, etc.

London shrinking

finishing process usually applied to **fabrics** containing wool in which the fabric is thoroughly moistened and then allowed to dry naturally in the absence of tension

loom

SEE **weaving machine**

loomstate, adj

descriptive of woven **fabric** as it leaves the loom before it receives any subsequent processing
cf. **grey**

looping

SEE **linking**

loop wheel knitting machine

SEE under **knitting machine**

loop yarn

SEE **bouclé yarn** under **fancy yarn**

low orientation yarn

LOY

yarn of low molecular orientation suitable for orientation by **drawing** at a high draw ratio

NOTE This term is used in contrast to **fully drawn yarn**, **partially oriented yarn** and **fully oriented yarn**

LOY

SEE **low orientation yarn**

LR

SEE **liquor ratio**

lustre

display of different intensities of light, reflected both specularly and diffusely from different parts of a surface exposed to the same incident light

NOTE This definition makes the difference in intensity of light the keypoint, since this forms the chief subjective impression on the observer of lustre. Both specular light and diffuse light need to be present together, for, if diffuse light only is present, the surface is **mat**, not lustrous, whereas, if specular light only is present, the surface is mirror-like, and again not lustrous. The phrase "exposed to the same incident light" has been included to rule out shadow effects which have no part in lustre proper. The general term "surface" is intended to apply to **fibres**, **yarn**, and **fabrics**, and indeed to other surfaces, such as that of a pearl.

Madras muslin

gauze fabric with an extra weft, which is bound into the gauze texture in the figured parts and cut away elsewhere
cf. **muslin**

magazine creel

structure for mounting two or more **yarn** packages that are tied top to tail

NOTE The yarn is withdrawn over-end, to give continuity from successive packages.

Malimo
cf. note (b) to **stitch-bonded fabric**

Malipol
cf. **note (c) to stitch-bonded fabric**

Malivlies
cf. note (d) to **stitch-bonded fabric**

Maliwatt
cf. note (a) to **stitch-bonded fabric**

man-made fibre
SEE manufactured fibre under fibre

manufactured fibre
SEE under **fibre**

marcella
cf. note to **woven piqué**

marl yarn
cf. note 2 to **twist** under **worsted yarn**

marocain
crêpe fabric with a pronounced weftwise rib formed by the use of a fine close-set **warp** and two highly twisted **Z-twist yarns** alternating with two highly twisted **S-twist yarns** in the **weft**

marquissette
light, open-textured, fine-quality **gauze** in which slipping is reduced by the **warp** threads being crossed by means of the leno principle
cf. **leno fabric, leno weaving**

mass coloration
dope-dyeing
method of colouring **manufactured fibres** by incorporation of the colorant in the spinning composition before **extrusion** into **filaments**

matching
<dyeing process> process by which the amount of each dye present in a material is adjusted so that the final colour resembles that of a given sample as closely as possible

NOTE Matching can be done visually or by means of instruments that measure chromaticity co-ordinates.

matching
<shade assessment> comparison of dyed samples of textiles of nominally the same colour

NOTE Matching can be done visually or by means of instruments that measure chromaticity co-ordinates.

matrix-fibril bicomponent fibre
SEE under **bicomponent fibre**

matt, adj
with little or no **lustre**

matt weave
SEE **hopsack weave**

mature fibre

<cotton> **fibre** in which a high degree of wall thickening has taken place during cotton growth
cf. **maturity**

maturity

<cotton> cotton **fibre** characteristic which expresses the relative degree of thickening of the fibre wall

NOTE The degree of thickening of the fibre wall is usually estimated by one or more of several indirect tests which are often used to discover the proportion of fibres with a maturity greater than some selected level.

mat weave

SEE **hopsack weave**

mechanical finish

finish obtained by mechanical means, such as shearing and calendering

medical textile

textile which has been designed and produced for use in any of a variety of medical applications, including implantable applications

mélange printing

printing process in which bands of thickened dye paste, with intervening blank areas, are applied across **slubbings** of wool or other **fibres**, steamed, washed and then combed to produce a very even mixture of dyed and undyed lengths of fibre

mélange yarn

yarn produced from colour-printed **tops and slivers**, distinguishable from a **mixture yarn** in that the individual **fibres** are of more than one colour

melled fabric

fabric consisting wholly or in part of **bicomponent fibres** in which cohesion has been achieved through the selective melting of one component of the bicomponent fibres

melton

heavyweight **fabric**, all-wool, or with cotton **warp** and woollen **weft**, and which is finished by heavy milling and cropping, giving the fabric a felted appearance
cf. note to **kersey**

NOTE It is usually made in a 2/2 **twill**, especially if all-wool, but it is sometimes made in other **weaves** to facilitate milling and the covering of the cotton warp.

melt spinning

<manufactured fibre production> conversion of a molten polymer into **filaments** by **extrusion** and subsequent cooling of the extrudate

melt transfer

cf. note to **transfer printing**

mercerization

treatment of cellulosic textiles, in **yarn or fabric** form, with a concentrated solution of caustic alkali whereby the **fibres** are swollen, the moisture regain, strength and dye affinity of the materials are increased, and their **handle** is modified

NOTE The modern process of mercerization involves both swelling in caustic alkalis and stretching, to enhance the lustre and to increase colour yield and cotton yarn strength. A related process, anhydrous liquid ammonia treatment, produces some of the effects of mercerization. In chain mercerizing, shrinkage in fabric width is allowed, followed by restretching and washing on a clip **stenter**. In chainless mercerizing, the fabric is effectively prevented from shrinking by being transported over rotating drums, cf. note 1 to **stenter**

hot mercerization

treatment of cellulosic **fabric** with a hot concentrated solution of caustic alkali to facilitate uniform penetration before cooling and stretching, etc., so as to improve the degree of **mercerization**

slack mercerization

mercerization of a fabric in the absence of tension, or under reduced tension

NOTE After washing-off, the fabric remains in the shrunken condition, and consequently a high degree of yarn **crimp** is obtained and the fabric becomes more extensible. There are two reasons for operating this process: to produce a stretch fabric or as part of the process for crease-resisting linen. **Dye** absorption is increased but **lustre** is not.

merino

SEE **merino (wool)**

merino fabric

<woollen fabric> woollen **fabric** made in England from yarns produced from wool reclaimed from soft woollen and **worsted** dress goods

merino fabric

<**worsted fabric**> **plain-back** worsted fabric developed in England in the 1820s, made from fine **yarns** spun from **merino wool** or other fine wools of 23 tex to 28 tex for the **warp** and 17 tex to 22 tex for the **weft**

merino (wool)

wool from merino sheep and whose **fibre** diameter is normally finer than 25 µm

metachrome process

single-bath method of dyeing in which the **fibre** is treated in a dyebath containing a suitable **chrome dye** together with a chromate, whereby a dye-chromium complex is formed within the fibre

metallic yarn

SEE **metallized yarn**

metallized yarn**metallic yarn**

yarn which has free metal as a component

NOTE There are several types, the best known of which are as follows:

- a) yarns in which separate metal **fibres** or **filaments** are included;
- b) metal of narrow strip section, usually lustrous; cf. **flat metal yarn**
- c) metal of narrow strip section, coated or laminated with film such as viscose, cellulose ethanoate (acetate), butanoate (butyrate), or polyester; the film could be coloured;
- d) yarns to which metal is attached or on which metal is deposited on the fibres, for example chemically, by electric arc, or by adhesive;
- e) multi-end yarns in which at least one **single yarn** is metallic; and
- f) **a gimp** in which the helical covering consists of a strip of (b) above.

metameric match

match that is judged to be satisfactory under a particular illuminant but not under illuminants of different spectral compositions

metamerism

phenomenon whereby the nature of the colour difference between two similarly coloured objects changes with change in the spectral distribution of the illuminant

NOTE 1 Metamerism is most frequently seen when two coloured objects match in daylight, but differ markedly in colour when viewed in tungsten-filament light. This arises because the visible absorption spectra of the two objects differ significantly, although the tristimulus values in daylight are identical.

NOTE 2 This term is often used loosely to describe the behaviour of a single-coloured object that shows a marked change of colour as the illuminant changes, but this effect is properly described as lack of colour constancy.

microfabric

fabric composed of **microfibres** or microfilaments

microfibre

ultra-fine fibre

ultra-fine microfibre

<generic> **fibre or filament of linear density** below approximately 1 dtex

NOTE Fibres finer than approximately 0.2 dtex are sometimes referred to as "ultra-fine fibres".

microfibre

<glass and other manufactured mineral fibres> **fibre or filament** of thickness less than approximately 3 µm

migration

movement of an added substance, for example a **dye, pigment**, cross-linking agent or alkali, from one part of a textile material to another

milanaise

narrow **braid** or corded **fabric** in which the cord effect is produced by **leno weaving** and in which one end is made to cross another coarse end in an alternate crossed and open **shed** sequence

Milanese warp knitting machine

SEE under **knitting machine**

mildew

growth of certain species of minute fungi

NOTE On textile materials, this could lead to fibre degradation and could cause discoloration, tendering, and variation in dyeing properties.

milling fulling

<fabric finishing> consolidation or compacting of **fabrics** that usually contain wool or other animal **fibres**

NOTE The treatment, which is usually given in a rotary milling machine or in milling stocks, produces relative motion between the previously wetted fibres of a fabric. Depending on the type of fibre, the structure of the fabric, and variations in the conditions of milling, a wide range of effects can be obtained, which vary from a slight alteration in **handle** to a dense matting with considerable reduction in area.

mixture

SEE under **worsted yarn**

mock-leno fabric

woven **fabric** which imitates the appearance of **leno weaving**

moire fabric

ribbed or corded **fabric** that has been subjected to heat and heavy pressure by rollers after **weaving** so as to present a rippled appearance

moire finish

watered or rippled appearance on the surface of a **fabric** obtained by two layers of a rib or cord fabric being passed between heavy heated rollers or by the fabric being passed between suitably engraved **calender** rollers

moisture content

ratio of the mass of moisture in a material to the total moist mass, usually expressed as a percentage
cf. **(moisture) regain**

(moisture) regain

ratio of the mass of moisture in a material to the **oven-dry mass**, usually expressed as a percentage

moleskin fabric

thick cotton **fabric**, originally uncut **corduroy** with a very high **weft sett**, **piece dyed** and given a smooth raised **finish** to simulate the fur of a mole

NOTE Only one **warp** is used, but the picks are arranged two face and one back.

molleton

heavy reversible cloth with a nap on both sides, originally made of wool

molten-metal dyeing process

method of continuous dyeing in which material is impregnated with an aqueous liquid containing **dye** and chemicals and then passed through a bath of liquid low-melting alloy at a temperature usually below 100 °C

monofilament yarn

SEE (continuous-)filament yarn

moquette

upholstery **fabric** in which pile **warp** ends are lifted over **wires** that might or might not have knives, which results in a cut or uncut **pile**

NOTE Cut moquette can also be made on the face-to-face principle.
cf. **woven velvet**

mordant

substance, usually a metallic compound, applied to a **substrate** to form a complex with a dye, which is retained by the substrate more firmly than the dye itself

mordant dye

dye which is applied to a **fibre** in conjunction with metallic **mordants** or salts in order to fix the dye within the **fibre**

cf. **chrome dye**

mosquito net

net made on **warp knitting machines**

NOTE Mosquito nets were originally made of **plain net**.

moss-crêpe fabric

fabric made in a **moss-crêpe weave** from **S-twist** and **Z-twist** moss-crepe **yarns** in **warp and weft**, and characterized by a spongy **handle**

moss-crêpe weave

crepe weave with a repeat in the **warp and weft** directions that is relatively large compared with that in many other crepe weaves

mote

<cotton> vegetable impurity in cotton

bearded mote

piece of seed coat with fairly long **lint fibres** attached

fuzzy mote

mote consisting of whole aborted or immature seeds covered with fuzz **fibres** and sometimes also with very short **lint fibres** whose development has ceased at a very early stage

mothproofing insect-resistant treatment

treatment of textile materials, such as wool and other keratin **fibres**, with an insecticide to reduce damage caused by the larvae of moths feeding on the textile fibre

motif

decorative figure or pattern which can be cut out and applied to a garment for ornamentation

move number**step number**

<**warp**> number of ends by which the interlacing of a **weft** thread in a **weave** moves to the left or the right relative to the weft thread immediately below

NOTE Arrows can be used to denote the direction in which the move number has been applied. Move numbers (M) can therefore be used to describe weaves, for example the eleven-end **sateen**.

move number

step number

<weft> number of picks by which the interlacing of a **warp** thread in a **weave** moves upwards or downwards relative to the warp thread on its immediate left

NOTE Arrows can be used to denote the direction in which the move number has been applied.

mule spinning

intermittent method of spinning whereby the actions for the formation of a **yarn**, i.e. **drafting** and twisting, are undertaken in one operation and the winding onto the package in another

multifeeder circular weft knitting machine

SEE under **knitting machine**

multifilament yarn

SEE (continuous-)filament yarn

multilobal

descriptive of a **fibre** or **filament** whose cross section resembles a polygon but which has concave sides and rounded vertices (lobes)

multiphase weaving machine

SEE under **weaving machine**

multi-piece weaving machine

multi-space weaving machine

narrow fabric weaving machine equipped for the simultaneous **weaving** of two or more **pieces of fabric**

multi-shuttle weaving machine

multi-piece weaving machine in which **weft** insertion is by **shuttle**

multi-space weaving machine

SEE **multi-piece weaving machine**

mungo

fibrous material made in the woollen trade by the **pulling** of new or old hard-woven or milled cloth or felt in rag form cf. **shoddy**

muslin

lightweight, open cloth of plain weave or simple leno **weave**, traditionally with a **cover factor** of 4.5 to 8.0 in the **weft**

cf. **Madras muslin**

nap

fibrous surface produced on a **fabric** or felt by **raising**, in which part of the **fibre** is lifted from the basic structure

napping

SEE **raising**

narrow fabric

fabric made by **fibres** or **yarns** being interlaced, and which does not exceed 45 cm in width

narrow fabric selvedge

SEE under **selvedge**

natural fibre

SEE under **fibre**

needle

<machine knitting> hooked element used for intermeshing needle loops

bearded needle**spring needle**

needle with an extended terminal hook or beard which can be flexed to close the hook and which can return to its original position when the force is removed

carbine needle

needle similar in shape to a **bearded needle** but with the beard shielded by a shoulder on the stem

NOTE

The needle can only be lapped in one direction for the **yarn** to pass under the beard. A presser is not necessary as the needle is self-acting, the shoulder passing the loop onto the beard. The needle has a limited use, mainly in **crochet-knitting machines**.

compound needle

needle in which the hook and hook closing parts are separately controlled

double-ended needle

needle with an operative hook at each end

latch needle

needle with a terminal hook closed by a pivoting latch in which the knitting action is self-acting since the **fabric** loop pivots the latch and allows the loop to be cleared from the open hook or to be knocked over the closed hook, depending on the direction of needle movement

spring needle

SEE **bearded needle** under **needle**

needle-bonded fabric

SEE **needlefelt**

needlebonding

SEE **needling**

needled fabric

SEE **needlefelt**

needlefelt**needle-bonded fabric****needled fabric****needle-punched fabric**

nonwoven structure formed by the mechanical bonding of a fibre **web** or **batt** by **needling**

NOTE

Originally **needlefelts** were produced as flat structures without pile, but recent advances in **needleloom** design have generated options for the production of various **pile** textures including both cut and loop.

needlefelting

SEE **needling**

needleloom

<**narrow fabric**> **shuttleless weaving machine** in which the **weft** is drawn from a stationary supply and introduced into the **shed** in the form of a double-pick by a weft inserter needle, the weft being retained at the opposite selvedge by the action of knitting, or by the introduction of a locking thread from a separate supply

needleloom

<**nonwoven fabric**> machine for producing **needlefelt** in which (a) needle beam(s) reciprocate(s) vertically

NOTE

Felting needles mounted on a board pass through a **web** or **batt**, which is supported between bed and stripper plates.

needleloom selvedge

SEE **narrow fabric selvedge** under **selvedge**

needlepoint

hand-made **lace** made by stitching, according to a predetermined plan, with a sewing needle and thread

needle-punched fabric

SEE **needlefelt**

needlepunching

SEE **needling**

needling

needlebonding

needlefelt

needlepunching

<nonwoven manufacturing process> use of barbed needles mounted in a **needleloom** to entangle a fibre **web** or **batt** by mechanical reorientation of some of the **fibres** within its structure

nepp yarn

SEE **Knickerbocker yarn** under **fancy yarn**

net

open-mesh **fabric** in which a firm structure is ensured by some form of twist, interlocking, or knitting of the **yarn**
cf. **plain net**

neutral-dyeing acid dye

acid dye which has **substantivity** for wool, silk or polyamide when applied from a bath at a neutral PH

new rags

waste **fabric**, whether woven or knitted, that is left after a garment has been cut out

ninon

<fabric> **voile fabric** of **manufactured fibre yarns**

NOTE Ninon was originally made from very fine, highly twisted silk **yarns** with two or three ends **weaving** as one and with two or three threads lightly twisted together to form the **weft** so that they gave the effect of two or three picks in a **shed** (known as double or triple ninons respectively).

nip

line or area of contact between or in proximity to two contiguous surfaces that move so as to compress and control the velocity of material that passes between them

non-automatic loom

non-automatic weaving machine

power-operated **weaving machine** on which the **weft** supply in the **shuttle** is changed by hand

non-automatic weaving machine

SEE **non-automatic loom**

non-fibrous matter

quantitative fibre analysis> oils, fats, waxes, dressings, salts and other soluble materials, all or some of which could be present in a **fibre** mixture, and which could interfere with the dissolution of fibres in quantitative analysis

nonionic dye

dye that does not form ions in aqueous solution

cf. **disperse dye**

nonwoven, noun

SEE **nonwoven (fabric)**

nonwoven (fabric)

fabric normally made from continuous **filaments** or from **staple-fibre webs or batts** strengthened by bonding using various techniques including adhesive bonding, mechanical interlocking by **needling** or fluid jet entanglement, thermal bonding and stitch bonding

NOTE The following are controversial areas:

- a) wet-laid fabrics, containing wood pulp, in which the boundary with paper is not clear;
- b) stitch-bonded fabrics, which contain **yarn** for bonding purposes; and
- c) needled fabrics containing reinforcing fabric.

normal fibre

<cotton> **fibre** whose wall has developed more than a specified amount
cf. **maturity, thin-walled fibre**

oakleaf braid

jacquard-woven narrow fabric with a conventional oakleaf and acorn design contained within a border, customarily used as a uniform cap-band

OBA

SEE **fluorescent brightening agent**

OE yarn

SEE **open-end spun yarn**

oil cloth

cotton **fabric** that has been treated on one side with a drying oil to make it impervious to water

oil-combed top

wool or hair **top** produced by adding 3 % extra oil above the dry-combed top standard to give a total fatty matter content of 4.6 % based on the fat-free **oven-dry mass**

old rags

fabric from worn garments that have been discarded

ombré

fabric with a dyed, printed or woven design in which the colour is graduated from light to dark and often into stripes of varying shades

onium dye

cationic dye that is solubilized by a labile ammonium, sulfonium, phosphonium or oxonium substituent which splits off during fixation to leave an insoluble colorant in the **fibre**

open-boiling

scouring of cellulosic textiles with alkaline liquors in open vessels at or near boiling point
cf. **scouring**

open-end spinning break spinning

spinning system in which **sliver** feedstock is highly drafted, ideally to individual **fibre** state, which creates an open end or break in the fibre flow after which the feedstock is reassembled on the end of a rotating **yarn** and twisted

NOTE Various techniques are available for collecting and twisting the fibres into a yarn, the most noteworthy being **rotor spinning** and **friction spinning**.

open-end spun yarn**OE yarn**

principally rotor-spun **yarn**

cf. **open-end spinning, rotor spinning**

opening

action of separating closely packed **fibres** at an early stage in the processing of raw material

optical brightening agent

SEE **fluorescent brightening agent**

ordinary lay

laid rope in which the direction of twist in the roping **yarn** and the finished **rope** are the same, and in which the direction of lay of the **strand** is in the opposite direction

organdie

plain-weave, lightweight, transparent **fabric** with a permanently stiff **finish**

orientation

<molecular arrangement predominant direction of **fibrils** or linear macromolecules in the fine structure of **fibres**

NOTE 1 In **manufactured fibres**, the structural units are normally aligned along the fibre axis as the result of **extrusion**, stretching, or **drawing**. In **natural fibres**, the predominant direction is determined during growth, for example a helix round the fibre axis in cotton.

NOTE 2 Unoriented structures are those in which orientation is absent. Disoriented structures are those in which orientation has been reduced or eliminated as a result of a disrupting treatment.

orientation

<yarn preparation> parallelization of **fibres**, usually as a result of a combing or attenuating action on fibre assemblies, which causes the fibres to lie substantially parallel to the axis of the **web** or **strand** which they constitute

oven-dry mass

constant mass obtained by drying textiles at specified temperatures that vary, according to **fibre**, between 77 °C and 110°C

overlap

<warp knitting> lateral movement of the guide bars on the beard or hook side of the needles

NOTE This movement is normally restricted to one needle space.

Oxford

plain-weave shirting of good-quality **yarns** and that has two **warp** ends **weaving** as one

NOTE Fancy-weave effects can be incorporated, and dyed yarns are used to form stripes.

oxidized oil staining

gilding

yellowing

staining of textiles caused by oxidation of oil acquired or applied during processing

NOTE The presence of oxidized oil might cause discoloration and affect the dyeing property of the material. In the manufacture of woollen and **worsted yarns**, this discoloration is sometimes referred to as **bronzing**.

ozone fading

irreversible change in hue that occurs when dyed or printed textiles are exposed to ozone under severe conditions of atmospheric pollution

package dyeing

method of dyeing in which the liquor is circulated radially through a wound package

padding

<finishing> impregnation of a **substrate** with a liquor or a paste followed by squeezing, usually by passage through a nip, to leave a specific quantity of liquor or paste on the substrate

padding thread
SEE **wadding thread**

paisley pattern
decorative pattern featuring an Indian cone or pine, and used on shawls and **fabrics**

Panama
<fabric> clear-finished, plain-weave **fabric**, with approximately square construction, typically with a density of 170 g/m² to 240 g/m², generally used for men's tropical suiting

Panama canvas
canvas of matt weave that is given a **beetled finish** and used for embroidery purposes

paper yarn
yarn consisting of one or more continuous lengths of paper strip, or a yarn incorporating one or more continuous lengths of paper strip as a major component

parallel-laid nonwoven fabric
fabric made from a **web** or **batt** by **parallel laying**, followed by any type of bonding process

parallel laying
production of a **web** or **batt** from single or superimposed card webs, laid in the direction of **carding**, for the manufacture of **nonwoven fabric**

parallel shed weaving machine
multiphase weaving machine with several **sheds** that are formed simultaneously with each extending across the full width of the **warp** and with the shed moving in the warp direction

paramatta
fine quality 1/2 **twill fabric** with **worsted weft**, used particularly in the making of double-textured rubber-proofed garments

parchmentizing
finishing treatment, applied mainly to cotton, comprising a short contact with, for example, sulfuric acid of high concentration, the aim of which is to produce a variety of effects, depending on the type of **fabric** and the conditions used, ranging from a linen-like **handle** to a transparent **organdie** effect

Paris binding
SEE **under binding**

partially oriented yarn
POY
continuous-filament yarn made by the **extrusion** of a synthetic polymer so that a substantial degree of molecular orientation is present in the resulting **filaments**, but further substantial molecular orientation is possible

NOTE 1 The resulting **yarn** will usually require to be drawn in subsequent processing in order to orient more fully the molecular structure and to optimize the tensile properties.

NOTE 2 Yarns of this type made by **high-speed spinning** are commonly used as a feedstock for producing draw-textured yarns, cf. **draw-texturing**

pelerine
effect produced by the transference of **sinker** loops

percale
closely woven plain-weave **fabric**, usually of Egyptian cotton, of lighter mass than chintz

percentage extension
increase in length of a specimen during a **tensile test**, expressed as a percentage of the **gauge length** or the nominal gauge length

perch, noun

manually or mechanically operated machine consisting of a system of rollers over which **fabric** is drawn at open width for the purpose of inspection

perforated weave

open mesh character of **mock-leno fabric** created primarily by the **weave**

permanent press

SEE **durable press**

permanent set

SEE under **setting**

petersham ribbon

<millinery> **ribbon** in plain weave, originally used on ladies' hats, and which usually has a continuous-filament **warp**, typically with 10 picks to 12 picks per centimetre, of cotton or spun viscose, giving it a pronounced rib in which the edge is formed by the turn of the weft

petersham ribbon

<skirts> **narrow fabric** with a pronounced rib, usually with 9 picks to 12 picks per centimetre and lateral stiffness produced by the high density of the **weave** or by a finishing process in which the selvedge is made in a contrasting weave

photodegradation

degradation caused by the absorption of light or other radiation and by consequent chemical reactions

NOTE Ultraviolet radiation is an especially potent cause.

pick, noun

shot

<weaving> single operation of the weft-inserting mechanism

pick, noun

shot

<woven fabric> single **weft** thread

pick, verb

<weaving> pass the weft through the warp **shed**

pick-and-pick fabric

woven **fabric** in which alternate picks are of different colours or **yarns**

pick-and-pick loom

shuttle loom that picks alternately from opposite sides

pick finding

procedure for locating the position of the incomplete pick in the **weave** repeat during **weaving**

picking

<fabric preparation> removal by hand, preferably before the final stage of fabric finishing, of any contamination (such as **kemp**, wrong **fibre** and coloured hair) which has not been removed by previous processing

picking

<mending> rectification of the face and back of a carpet after manufacture including insertion of missing tufts, replacement of faulty ones, and repair of broken **yarns** in the backing

picking

<weaving> operation of passing the **weft** through the warp **shed**
cf. **beating up**, **shedding**

**piece
bolt**

length of **fabric** of customarily accepted unit length

NOTE A frequent contract practice is for the purchaser to specify a minimum piece length below which no pieces will be accepted.

piece dye

dye one or more **pieces** of **fabric**

piece-goods

fabric sold by or from the **piece**

pigment

substance in particulate form that is substantially insoluble in a medium, but that can be mechanically dispersed in this medium to modify its colour or light-scattering properties

pigment padding

application of an aqueous dispersion of a **pigment** to a **fabric** by **padding**

pile

surface effect on a **fabric** formed by tufts or loops of **yarn** that stand up from the body of the fabric

NOTE **Nap** and **pile** are often used synonymously, but the practice of using the two terms for different concepts is to be encouraged as providing a means of differentiation and to avoid confusion.

pile fabric

fabric with a **pile** surface, which can be of cut or uncut loops

pilling

entangling of **fibres** during washing, dry cleaning or testing, or when in use to form balls or pills which stand proud of the surface of a **fabric** and which are of such density that light will not pass through them (so that they cast a shadow)

pin drafting

SEE **gilling**

pin stenter

cf. note 1 to **stenter**, noun

pin twisting

generation of false twist by a device in which a **yarn** is wrapped round a small pin or peg of wear-resistant material mounted across a rotating tube through which the yarn passes cf. **false twisting**

piping

braided, woven or knitted **narrow fabric** comprising a flat flange or sewing foot to one edge of which is attached a **cord** that remains visible when the flange is sewn into a seam

pique, woven

SEE **woven pique**

pim quill weft bobbin

<support> support, slightly tapered, with or without a conical base, on which **yarn** is spun or wound for use as **weft**

pim quill weft bobbin

<weft package> **weft** package formed when yarn is wound on a **bobbin**

pim quill weft bobbin

<yarn preparation> relatively long but narrow package of yarn taken up on a cylindrical former during the draw-twisting of **continuous-filament yarns**

pitch

<carpets> number of knots per square inch in the **pile** of hand-made carpets

pitch

<fabric>

SEE **sett**

pitch

<weaving machine> distance between jack centres on a **dobby**, or needle centres on a **jacquard**

plaid

SEE **tartan**

plain back

twill-face, plain-weave back structure made from single **worsted yarns**

plain net

twist **lace** fabric made from equal numbers of **warp** and **bobbin** threads, and in which the warp threads run lengthwise in the **fabric** and the bobbin threads twist round the warp threads and traverse diagonally in the fabric

NOTE 1 Equal numbers of bobbin threads are always traversing in opposite directions.

NOTE 2 A fine plain net made of silk is sometimes described as **tulle**.

plain weave

weave interlacing in which the odd **warp** threads operate over one and under one **weft** thread throughout the **fabric** with the even warp threads reversing this order to under one, over one, throughout

NOTE 1 Plain weave is the simplest of all weave interlacing.

NOTE 2 A plain weave does not necessarily result in a plain surface effect or design in the fabric, for example variation of the yarn linear densities warp to weft or throughout the warp or weft, and variation of the thread spacing warp to weft can produce rib effects, while colour patterning of the warp or weft results in **colour-and-weave effects**.
cf. **faillie**, **grosgrain**, **poult**, **taffeta**

plait

<generic> intersection of the **strands of a braid**

plait

<narrow fabric>

SEE **braid**

plait pitch

longitudinal distance along the axis of a **braid** from a point on a plait to the corresponding point on the next plait along

plied yarn

SEE **folded yarn**

plush, woven

SEE **woven plush**

ply, noun

<fabric> one component or layer of a **compound fabric**

ply, verb

SEE **fold**, verb

pneumatic structure

<technical textiles> **fabric** structure constructed of small tubes containing high-pressure air at, for example, ten times atmospheric pressure

point bonding

method of making **thermally bonded nonwoven fabric**, in which heat and pressure are applied to specific areas by the use of embossed **calender** rollers so as to cause local bonding

point paper

SEE **design paper**

polishing

<yarn> operation(s) for conferring on **yarns** a relatively high degree of smoothness of surface

NOTE 1 Polishing is usually done by sequential yarn processes as follows:

- a) single-end yarn sizing;
- b) drying; and
- c) frictional treatment by the passage of yarn over contacts with stationary or revolving burnishes or brushes at predetermined temperatures.

NOTE 2 The application of a **size** coating to a yarn promotes smoothness of surface, and in hairy yarns helps to lay protruding **fibres** in one direction.

NOTE 3 A typical objective of polishing is to reduce friction between yarn and machine, for example during the passage of sewing yarns through eyes of needles in power-sewing machines.

polymer

molecule consisting of a large number of covalently bonded, repeating units

polymerization

process used to link small chemical molecules into a polymer

pongee

plain-weave, lightweight **fabric** that is power woven, and made from **yarns** other than silk

NOTE Pongee was originally handwoven in China from wild silk.

poplin

plain-weave, cotton-type **fabric** with weftwise ribs and high **warp sett**

potting

finish on woollen **fabric** that produces a glossy surface and a soft **handle**

poult

plain-weave **fabric** woven from **continuous-filament yarn**, with a rib in the **weft** direction

powder bonding

method of making **thermally bonded nonwoven fabric**, in which the fibre **web** or **batt** is bonded by activating heat-sensitive powder dispersed within it

power loom

loom which is driven by a source of power such as an electric motor

POY

SEE **partially oriented yarn**

preboarding

operation of **boarding** carried out on garments or stockings, usually before they are scoured and dyed

NOTE Woven or warp-knitted articles are usually made of **fabric** that has been preset by either moist steam or dry heat according to established methods for stabilizing the fabric, and finished goods made of set fabric do not need to be preboarded. On the other hand, hosiery made of knitted fabric that has not been stabilized or fashioned depends to a great extent on the preboarding operation for conferring on it its final shape and ability to resist permanent creasing in such treatments as dyeing. Preboarding is confined mainly to fabrics or articles made from synthetic polymer **yarns** (e.g. nylon) and is done by submitting them to the action of steam under pressure or dry heat so that they shrink during the process into the desired shape. In addition to removing the stress introduced in the yarns during the manufacture, the treatment stabilizes the dimensions of the articles so that they undergo no further change of shape during subsequent **scouring** and dyeing, provided that these processes are carried out under conditions less severe than those used during the preboarding. In general practice, stockings are drawn over stainless steel formers and subjected to wet steam at 170kPa for a predetermined time.

preparation

<fabric> treatment given to **grey** fabrics to remove natural colorants, impurities and contaminants before coloration or finishing treatments

NOTE Preparation normally comprises chemical processing treatments that could include, for example, singeing, **desizing**, **scouring**, bleaching, **mercerization** or anhydrous liquid ammonia treatment.

pre-shrunk, adj

descriptive of textile material that has been shrunk to predetermined dimensions in order to minimize shrinkage in use

NOTE Some **fabrics** are pre-shrunk by **compressive shrinkage**.

presser

<knitting> device used to close the needle beads on machines fitted with **bearded needles**

presser-foot

<weft knitting> device which presses downwards onto the stitches to prevent them from rising with the needles

NOTE The device enables a wider range of structures to be knitted than is normally possible with a conventional take-down arrangement. It consists of either a flexible wire of circular or angular cross section, or a thin plate shaped to operate behind or between the needle bed(s), particularly in the case of V-bed **flat knitting machines**.

press finish

finish given to **fabrics** or garments by **pressing**

pressing

application of pressure, with or without steaming or heating, to remove unintended creases and to impart a flat appearance to **fabrics** and garments, or to introduce desired creases in garments

press-off

<knitting> accidental or intentional casting off of the loops from the needles when the supply of yarn ceases while the **knitting elements** continue to perform their knitting cycle

pressure boiling

scouring of cellulosic textiles with alkaline liquors in closed vessels under excess pressure, normally 140 kPa to 210 kPa

pressure dyeing

forced circulation of dye-liquor through packages of **fibre, yarn or fabric** at static pressures above atmospheric pressure and thus without limitation of temperature

print bonding

method of making **nonwoven fabrics** in which there is controlled application of adhesive to specific areas of the fibre **web** or **batt** by means of printing techniques similar to those used for coloration
cf. **adhesive-bonded nonwoven fabric**

printing

production of a design or motif on a **substrate** by application of a colorant or other reagent, usually in a paste or ink, in a predetermined pattern cf. note to **wet processing**

prominent twill

cf. note 1 to **twill (fabric)**

proof, adj

fully resistant to a specified agency, either by reason of physical structure or inherent chemical non-reactivity, or arising from a treatment designed to impart the desired characteristics

NOTE 1 Proofing treatments are defined by specified limits ascertained by tests, and the use of the term is related to the limiting conditions.

NOTE 2 Resistant", "retardant" and "repellent" are appropriate alternatives when the resistance is less than full.

proof, noun

finishing process used in felt hat manufacture in which the hoods or bodies are treated with shellac or other suitable stiffening agents to improve shape retention of the hats produced

proofed

descriptive of material that has been treated to render it resistant to a specified agency

prunelle twill

2/1 **twill weave**

pulling

<rag> operation of reducing rags and thread waste to a fibrous state

pulling

<wool> removal of wool from skins

purl knitting machine

SEE under **knitting machine**

quantitative analysis

method of determining the proportion of different substances in a sample, usually on a mass basis, for example the proportions of each **fibre** type in a blend

quench, noun

cooling zone in which the temperature of melt-spun filaments is lowered very rapidly or at a controlled rate soon after **extrusion**

NOTE The two main types are generally referred to as "water-quench" and "air-quench".

quill

SEE **pirm**

rack

<warp knitting> unit of 480 courses or complete knitting cycles

rack

<weft knitting> SEE **snog**

racking

<weft knitting> lateral movement of a needle bed or point bar across a predetermined distance on a **flat knitting machine**
cf. **snog**

rag, new

SEE **new rag**

rag, old

SEE **old rag**

raising napping

production of a layer of protruding **fibres** on the surface of **fabrics** by **brushing**, **teazling**, or **rubbing**

NOTE The fabric, in open width, is passed over rotating rollers covered with **teazles**, fine wires, etc., whereby the surface fibres are pulled out or broken to give the required effect.

random dyeing

production of multicolour **fabric** by the application of various colorants at intervals along a length of fabric by printing or other methods cf. **space dyeing**

NOTE Random dyeing is so called because it can be used to produce random coloration in the final fabric.

random-laid web

web or batt produced by **air laying**

rapier

SEE **rapier (loom)**

rapier (loom)

rapier weaving machine

power-operated **single-phase weaving machine** in which the **weft yarn** is positively driven through the **shed** by a rigid rod or a telescopic rod or a flexible ribbon
cf. **weaving machine**

NOTE A rapier weaving machine could have a single rapier to carry the weft across the full width or a single rapier operating bilaterally with a centrally located bilateral weft supply, or two rapiers operating from opposite sides of the weaving machine.

rapier weaving machine

SEE **rapier (loom)**

raschel warp knitting machine

SEE under **knitting machine**

rate of dyeing

rate at which a dye is absorbed by a **substrate** under specified conditions

NOTE It can be expressed quantitatively in several ways, such as the mass of dye absorbed in unit time, or the time taken for the substrate to absorb a given fraction of the amount of dye which it will absorb at equilibrium.

reaction spinning

<manufactured fibre production> process of **fibre** production in which polymerization is completed during or immediately after **extrusion**

reactive dye

dye that, under suitable conditions, is capable of reacting chemically with a **substrate** to form a covalent dye-substrate linkage

recommended allowance

percentage that, in the calculation of commercial mass of textile material and of **yarn linear density**, is added to the **oven-dry mass**

recovered wool

SEE **reused wool**

reduction clearing

removal of unfixed (usually disperse) dyestuff by means of an aqueous alkali-reducing system, usually sodium hydroxide or sodium dithionite

reed sley

device, consisting of several wires closely set between two slats or baulks, that can serve any or all of the following purposes: separating the warp threads; determining the spacing of the warp threads, guiding the **shuttle** or rapier, and **beating up the weft**

reed gratings

transparent plates containing tines that are parallel and uniformly spaced in the cross-wise direction, and used to determine irregularity in the spacing of the reed wires

reed number

SEE **count of reed**

reel

<section warping machine> revolving drum, mill or swift

reel

<sewing thread> cylindrical former, usually flanged, suitable for use with domestic sewing machines, onto which **sewing thread** is wound

reel

<yarn> SEE **hank**

refractive index

ratio of the velocity of light in a vacuum to that in a given material, used in **fibre** identification or as a measure of fibre orientation

regain, noun

SEE **(moisture) regain**

regenerated fibre

SEE under **fibre**

relative humidity

ratio of the actual pressure of the water vapour in the atmosphere to the saturation pressure of water vapour at the same temperature and the same total pressure, usually expressed as a percentage

relaxation

releasing of strains in textile materials

repellent

cf. note 2 to **proof**, adj

repp

plain-weave **fabric** with a prominent weftwise rib effect, made from two **warps** and two **wefts**, both arranged alternately coarse and fine

reserve printing style

SEE **resist printing style**

residual shrinkage

latent shrinkage of a **fibre**, **filament**, **yarn**, **fabric** or garment that could become apparent during subsequent processing or use

resist, noun

<dyeing> substance applied to a **substrate** to prevent the uptake or fixation of a dye in a subsequent operation

NOTE The substance can function by forming a mechanical barrier, by reacting chemically with the dye or substrate, or by altering conditions, such as pH value, locally so that development cannot occur.

resist, noun

<printing plate or roller making> a coating of, for example, light-hardened gelatine which protects from the action of the etching solution those areas of the plate or roller which are not required to be etched

resistant

cf. note 2 to **proof**, adj

resist printing style**reserve printing style**

patterned design achieved by the dyeing of **fabric** previously printed with a resistant to give a white pattern on a coloured ground

NOTE The end results of resist and discharge printing are often indistinguishable.

resultant linear density

actual **linear density** of a plied (folded) or cabled construction

retardant

cf. note 2 to **proof**, adj

retting

<flax, hemp> subjection of the crop or deseeded straw to chemical or biological treatment to render the **fibre** bundles more easily separable from the woody part of the stem

NOTE The resulting material is described as water-retted, dew-retted, chemically retted, etc., according to the process employed.

reused wool

recovered wool

wool rags and manufactured waste that are torn up and reprocessed into **fibres** again, and used for producing **shoddy** or **mungo** yarns

ribbon

narrow fabric, usually woven, generally with a continuous-filament **warp**, in a variety of styles for decorative and functional purposes

NOTE Ribbon can also be made by slitting broad **fabric**. This product could have a fused edge.

ric-rac braid

flat **braid** made by tensioning component threads differentially so that the **fabric** forms a zig-zag shape
cf. **van Dyke braid**

rigging

lengthwise folding of **fabric** so that the folded material is half its original width
cf. **note to sweating**

ring doubling

SEE **ring twisting**

ring spinning

continuous system of spinning in which twist is inserted into a **yarn** by the use of a circulating **traveller**

NOTE The yarn is wound onto the package since the rotational speed of the package is greater than that of the traveller,
cf. **spinning**

ring twisting ring doubling

system of producing a **folded yarn** by twisting together two or more **single yarns** using ring-and-traveller as the twisting technique

rope

article of **cordage**, more than approximately 4 mm in diameter, obtained when three or more **strands** are laid or plaited together or a **core** is covered by a braided or plastics film sheath

braided rope

sennit rope

sinnet rope

rope formed by the braiding or plaiting together of the strands

cable-laid rope

rope formed by three or more ropes twisted to form a helix round the same central axis

combined rope

rope in which the **strand** centres are made of steel and in which the outer portion of each strand is made of fibrous material

double-braided rope

rope in which the **strands** are plaited to form a **core** and round which are plaited further strands to form a sheath

NOTE The core lies coaxially within the sheath.

8-strand plaited rope

rope normally composed of four pairs of **strands** plaited in the form of a double 4-strand round **sennit rope**

hard-laid rope

rope in which the length of lay of the **strands** is shorter than usual, resulting in a stiffer and less flexible rope

hawser-laid rope

rope of three **strands** which are twisted to form helixes round the same central axis

laid rope

rope in which three or more **strands** are twisted to form helixes round the same central axis
cf. **ordinary lay**

sennit rope

SEE **braided rope** under **rope**

shroud-laid rope

4-strand **rope** with or without a **core**, with the **strands** twisted to form a helix round the central axis

sinnet rope

SEE **braided rope** under **rope**

soft-laid rope

rope in which the length of lay of the **strands** is longer than usual, resulting in a more flexible rope which is easily deformed

spring-lay rope

rope made from six **strands** over a main **core**, each strand of which has a alternating wire and **fibre** components laid over a fibre core

rotor spinning

method of **open-end spinning** which uses a rotor (a high-speed centrifuge) to collect and twist individual **fibres** into a **yarn**

NOTE The fibres on entering the rapidly rotating rotor are deposited round its circumference and temporarily held there by centrifugal force. The yarn is withdrawn from the rotor wall and, because of the rotation of the rotor, twist is inserted,
cf. **spinning**

roving

relatively fine fibrous **strands** used in the later or final processes of preparation for spinning

rubbing

<colour fastness testing> SEE **crocking**

rubbing

<yarn preparation> method of applying false twist to a **sliver**, **slubbing** or **roving** to effect the interlacing of **fibres**

NOTE 1 The false twist is produced by the pressure applied to the fibrous material as it passes between two surfaces of a machine, usually aprons, moving with a reciprocating sideways motion relative to the take-off direction of the material.

NOTE 2 The purpose of rubbing is to give the material sufficient strength to withstand the tensions imposed in the next process.

NOTE 3 As an alternative to inserting real twist, it enables faster operation of modern **worsted drawing** sets and removes the problems of **drafting** against twist.

ruche

narrow woven or knitted fringe, usually with a very heavy multiple-thread **weft** passed through it to form a skirt, and normally about 25 mm wide overall

NOTE It is generally used in lieu of piping round upholstery cushions. Other types consist of a web, the centre one-third of which consists of a **pile weave** or other raised effect, which is sewn round a central **core**. Ruches are usually flanged, the flanged portion being for insertion into the seam of the article to which the ruche is to be sewn.

rug wool

wool yarn, generally woollen-spun, twisted six-fold, the single thread before plying being not finer than 350 tex
cf. **note 2 to woollen**

runnage

<cordage> specific length, especially of **cords and ropes**

sacking

coarse **fabric** used chiefly for the making of bags or sacks, and often made from jute, hemp, flax or polyolefin
yarns

sailcloth

tightly woven **canvas** manufactured from nylon, polyester or aramid **yarns** and used for the manufacture of sails

NOTE 1 Originally sailcloth was a tightly woven cotton or linen canvas.

NOTE 2 Newer developments include laminated constructions which give greater dimensional stability.

sandwash finish

characteristic soft **handle** conferred on silk materials which have been subjected to the gentle abrasion of a sand and water mixture

sarsnet ribbon

ribbon constructed entirely in plain weave of very fine **warp and weft** and with high density, the weft density being higher than the warp density

sateen

<fabric> **fabric** made in **sateen weave**

sateen

<weave> SEE **sateen (weave)**

sateen (weave)

<weave> weft-faced weave in which the binding places are arranged with a view to producing a smooth **fabric** surface, free from **twill**

satin

<fabric> **fabric** made in **satin weave**

satin

<weave> SEE **satin (weave)**

satin (weave)

<weave> warp-faced **weave** in which the binding places are arranged with a view to producing a smooth **fabric** surface, free from **twill**

saturation bonding

method of making **nonwoven fabrics** in which a **web** or **batt** is treated by immersion in an adhesive in liquid form

cf. **adhesive-bonded nonwoven fabric**

saxony

high-quality **fabric**, made of wool of 60's quality or finer, spun on the woollen system

scaffolding yarn

component of a **plied yarn** that is used to support a weaker component through further processing until the weaker component is satisfactorily introduced into a **fabric**

NOTE The scaffolding yarn can then be removed by solvent or other chemical action or, alternatively, can be retained in the fabric to make it more durable.

scallop

curve or indentation along the edge of a **fabric**

schappe silk

yarn spun from **fibre** degummed by **schapping**

NOTE Nowadays the term is increasingly used as an alternative to spun silk.

schapping

method of degumming applied to silk waste, which removes part of the gum by a fermentation process, leaving up to 10 % of gum on the **fibre**

schreiner, adj

descriptive of a **calender** with two or three bowls, in which one (the middle one in a three-bowl calender) is of highly polished steel engraved with very fine parallel lines (grooves) running at an angle of approximately 20° to either the bowl axis or cross direction

schreiner, noun

<calender> engraved bowl of a schreiner **calender**

NOTE 1 The number of lines on the bowl can vary from 5 to 24 per millimetre, but is usually in the range 9 to 14.

NOTE 2 The angle of inclination of the lines is chosen to ensure good cover of the **fabric** and minimum **fibre** damage, for example a low inclination of 15° to 20° is recommended for **weft sateen** fabrics. Optimum effects are obtained when the lines slightly cross the direction of the surface **yarn** twist.

NOTE 3 In use, the engraved bowl is heated for finishing cotton fabrics.

schreiner, noun

<finish> finish obtained by the passage of a **fabric** through a schreiner **calender**, the object being to enhance the **lustre** of the fabric

scouring

treatment of textile materials in aqueous or other media in order to remove natural fats, waxes, proteins and other constituents, as well as dirt, oil and other impurities

screen-printing

design reproduction process, developed from stencilling, in which print paste is forced through the unblocked areas of a mesh that is in contact with the **substrate**

NOTE The mesh could be a woven **fabric** or a metal screen, flat or cylindrical (rotary screen). Pressure is applied to the paste by a squeegee (blade or roller), which is moved when the flat screen is stationary. In rotary screen-printing the squeegee is stationary.

scrim

lightweight **basecloth**

scutching

<cotton> final operation in the cotton system preparation line, in which the cotton **flocks** are opened mechanically, cleaned, and formed into a lap of specified mass per unit area, for feeding to a **carding** machine

scutching

<flax, hemp> mechanical operation of extracting flax or hemp **fibres** from the retted straw

Sea Island cotton

exceptionally fine, long-staple type of cotton

NOTE Sea Island cotton was formerly grown on Sea Island, off the coast of Georgia, USA.

sealed edge

SEE under **selvedge**

sealed sample

sample confirmed by specified persons and durably designated the standard for a product or one or more of its features, for example colour, style, make, dimensions, **fabric**, or trimmings

seam binding

narrow fabric, usually of cotton or **manufactured fibres**, made in plain weave, usually with contrasting selvages, and intended for use in covering or strengthening seams or edges in clothing

seam damage

damage to a seam leading to a reduction in seam performance or appearance, invariably associated with a change in the physical condition of one or more of the components of the seam
cf. **stitching damage**

seam failure

effective breakdown of a seam due to rupture of the **sewing thread**, rupture of **yarns** in the **fabric**, excessive **seam slippage**, or any combination of these
cf. **seam strength**

seam slippage

unwanted displacement of **fabric yarns** lying parallel to a seam line arising from transverse stress, and resulting in a partial or complete loss of seam integrity

seam strength

load required to cause **seam failure**, either in a sample removed from a made-up product or in a sample made to simulate a seam in a product, and normally measured at right angles to the seam line

seat belt webbing

woven webbing, usually of polyester, with special physical characteristics used for body-restraining purposes

seconds

textile products which, owing to some fault or imperfection, do not reach an agreed upon standard of quality

section warping

two-stage machine method of preparing a **warp** on a beam, consisting of winding a warp in sections on a **reel** and beaming off the complete warp from the reel onto a warp beam cf. **direct warping**

seersucker

fabric characterized by the presence of puckered and relatively flat sections, particularly in stripes but also in checks

NOTE The effect can be produced in a variety of ways, such as

- by **weaving** from two beams, with the ground ends at a higher tension and the ends for the puckered stripes woven at lower tension,
- by treatment of cellulosic fabrics, particularly linen and cotton, with sodium hydroxide (caustic soda) solution, which causes the treated parts to contract, and
- by using **yarns** that have different shrinkage properties.

self-twist spinning

method of spinning a **plied yarn** by **false twisting** two drafted fibrous **strands** in order to insert alternating **S-twist** and **Z-twist** along their lengths

NOTE 1 The strands are then brought into contact along their lengths so that their untwisting torques coincide and cause the strands to twist round each other, producing a **plied yarn** termed a **self-twist yarn** or **ST yarn**.

NOTE 2 The alternating twist strands are termed AT strands.

self-twist yarn

ST yarn

inherently twist stable, 2-ply **yarn** structure with alternating S and Z ply twist **strands**, which are themselves twisted with alternating **S-twist** and **Z-twist** before being plied

NOTE 1 The alternating twist present in the strands and in the resulting yarn takes the following change of order: Z and S in the strands give S and Z respectively in the self-twist yarn.

NOTE 2 The repeated pattern in the self-twist yarn is S-twist - no twist - Z-twist. The total length of this pattern is called the cycle length. The no-twist length is shorter than the twist lengths and is called the twist-changeover zone.

NOTE 3 The lengths of S and Z ply twist are essentially equal.

selvedge list

<generic> longitudinal edges of a **fabric** that are formed during **weaving**, with the **weft** not only turning at the edges but also passing continuously across the width of the fabric from edge to edge

NOTE Selvedges are often up to 20 mm wide and can differ from the body of the fabric in construction or **weave** or both, or they can be of exactly the same construction as the body of the fabric and be separated from it by **yarns** of different colour. Selvedges can contain fancy effects or can have brand names or fabric descriptions woven into, or printed on, them but their main purpose is to prevent fraying of the outside ends from the body of the fabric and to give strength to the edges of the fabric so that it will behave satisfactorily in weaving and subsequent processes.

helical selvedge

SEE **twist selvedge** under **selvedge**

leno edge

selvedge consisting of a set of threads interlacing with a **gauze weave** either at the edge or in the body of the **fabric**

narrow fabric selvedge

needleloom selvedge

selvedge formed when a double pick is inserted into each successive **shed** from one side of the **fabric**

NOTE The selvedge at the side of the loom from which the double pick is inserted is secured by the structure of the fabric, and at the opposite selvedge successive loops of **weft** are locked by one of the following methods:

- knitting successive loops together;
- knitting a catch thread through the loops;
- knitting a catch thread through the loops together with a locking thread, or
- passing a catch thread through each loop by means of a small shuttle.

needleloom selvedge

SEE **narrow fabric selvedge** under **selvedge**

sealed edge

cut edge of a **fabric** produced from **yarns** with thermoplastic properties and that has been treated by heat or chemical means to prevent ravelling of the edge

shuttleless weaving machine edge

<locking thread> selvedge in which either one or both edges are different from the normal woven selvedge in that the **weft** is held in position at the turn by threads other than the **warp** thread, for example by the use of an independent thread to lock the weft in position at the edge, or by interlocking of the weft threads

shuttleless weaving machine edge

<severed weft> edge formed by the severing of the **weft** near to the edge of the **fabric** and tucking of the cut end into the **shed** formed on the next pick

twist selvedge helical selvedge

set of threads making a half or complete revolution round one another between picks at the edge of a **fabric**

selvedge warp

number of threads intended to form a selvedge, wound onto either a beam or a **bobbin**, and delivered in the form of a sheet

semi-collapsed balloon spinning

semi-suppressed balloon spinning

system of **ring spinning** in which the rotating **yarn** balloon is greatly reduced at the start of an empty **bobbin** and is allowed to expand later when the bobbin is becoming filled with yarn

NOTE The small-balloon condition is achieved by allowing contact between the rotating balloon and the spindle top. As the bobbin fills, contact is lost and the yarn balloon is allowed to expand. Special spindle top extensions are used to obtain the required effect.

semi-permanent set

SEE under **setting**

semi-suppressed balloon spinning

SEE **semi-collapsed balloon spinning**

sennit rope

SEE **braided rope** under **rope**

serge

piece dyed fabric of simple **twill weave** (usually 2/2) of a square or nearly square construction and with a clear finish

NOTE Serge was originally made of wool, but is now sometimes made from other **fibres**, or from blends of wool with other fibres.

set

<fabric> SEE **sett**

sett

pitch

set

<fabric> density of ends or picks (or both) in a woven **fabric**, usually expressed as the number of threads per centimetre

sett

<weaving> SEE **count of reed**

setting heat setting thermal setting

process of conferring stability of form upon **fibres**, **yarns**, **fabrics**, or garments, usually by means of a single cycle (or multiple cycles) of heating and cooling in dry or moist conditions

NOTE The term "setting" is sometimes used in conjunction with a description of the particular characteristic to be stabilized, for example **crimp setting** and **twist setting**.

permanent set

set in which a structural change takes place that cannot be reversed

semi-permanent set

set which is resistant to ordinary effects experienced in use but which can be destroyed by more severe treatment

temporary set

set which is destroyed by relatively minor treatments such as light mechanical stress or immersion of the set material in water or by ordinary usage

NOTE "Cohesive set" is a term used in the wool industry for set that is removed easily, especially by water immersion.

set twist

SEE **twist set**

set yarn

SEE **stabilized yarn**

sewing thread

thread intended for stitching material either by hand or by machine

NOTE 1 A variety of thread structures and linear densities are used for sewing. Structures include cabled, braided, core-spun, textured and monofilament yarns; the very finest sewing threads are often monofilaments; the coarsest include thick cabled threads

used in sewing heavy **canvases** for tarpaulins etc., and for saddlery; in knitted garments, especially in linked seams, the knitting yarn can also be used as a sewing thread.

NOTE 2 To facilitate sewing, a lubricant, wax or other **finish** is often applied to the thread and some thread types might be polished.

NOTE 3 Many sewing thread manufacturers classify threads by means of ticket numbers which relate indirectly to ranges of nominal thread linear density values. The sewing thread ticket number or thread size determines the choice of sewing needle size.

sew-knit fabric

SEE **stitch-bonded fabric**

shade, noun

particular depth or intensity of hue

shade, verb

bring about relatively small modifications in the colour of a **substrate** by adding a further small amount of colorant with the object of matching a given pattern more accurately

shade cloth

open **fabric** used in agriculture to control shade and temperature, reduce evaporation and reduce damage to plants and crops from wind, rain, hail and frost

NOTE Shade cloth creates a local microclimate and also serves to keep out birds and insects.

shading

variations in the shade of dyed textile materials either within a batch or between batches of minimally the same shade

shantung

plain-weave, silk, dress **fabric** exhibiting random **yarn** irregularities resulting from the use of yarn spun from tussah silk

sharkskin fabric

woven or warp-knitted **fabric**, the characteristic of which is a firm construction and a rather stiff **handle**

NOTE One type of woven sharkskin fabric is made from **continuous-filament yarn** of high **linear density** in plain weave. Others might have several ends or picks woven as one to give a softer handle. Spun yarn can be used.

shed warp shed

opening formed when **warp** threads are separated in the operation of **weaving**

shedding

separation of **warp** threads, according to pattern, to allow for **weft** insertion or **picking** before **beating up**

NOTE Shedding is the first motion in **weaving**.

sheeting

medium-weight, closely woven, plain-weave or 2/2 **twill-weave fabric**, made from **yarns** of medium **linear density** and used primarily for bed coverings

NOTE Condenser-spun **weft** can be used.

shive

broken, dried plant stem matter that is removed from flax straw during **scutching**

shivey wool

wool that contains small particles of vegetable matter other than burrs

shoddy

fibrous material made in the woollen trade by **pulling**

shog

rack

<**weft knitting**> lateral movement of the needle-bed on a **flat knitting machine** or the angular displacement of the dial relative to the cylinder on a **circular weft knitting machine**

shogging

<warp knitting> lateral movement of a guide bar relative to the needle bar over a predetermined number of needle spaces

cf. **overlap**, **underlap**

short fibre content

SEE under **fibre length**

short-staple carding

SEE under **carding**

short-staple spinning

use of cotton spinning machinery to produce staple **yarns** from cotton or any other type of **fibre** possessing similar length and fineness characteristics

shot

SEE **pick**, noun

shrinkage

reduction in length or width of a **fibre**, **yarn**, **fabric**, or other textile, induced by conditioning, wetting, steaming, chemical treatment, wet processing (as in laundering), dry heat, or mechanical action

shrink-resist, adj

SEE **shrink-resist(ant)**

shrink-resist(ant)

descriptive of textile materials that exhibit dimensional stability conforming to specified standards based on tests designed to simulate normal conditions of usage

NOTE This property might be an inherent property of the textile material or might be conferred by physical or chemical processes.

shroud-laid rope

SEE under **rope**

shuttle

yarn-package carrier that is passed through the **shed** to insert **weft** during **weaving**

shuttleless weaving machine

power-operated **weaving machine** without **shuttles**

NOTE The following are examples of shuttleless weaving machines:

- a) weaving machines with projectiles, i.e. machines in which the weft thread is gripped by jaws and fitted in a projectile, which is then propelled through the **shed**;
- b) rapier looms; and
- c) **jet weaving machines**.

shuttleless weaving machine edge

SEE under **selvedge**

shuttle loom

hand loom, treadle loom or **weaving machine** that uses a **shuttle** to insert the **weft**

side-by-side bicomponent fibre

SEE **conjugate fibre** under **bicomponent fibre**

sighting tinting

temporary coloration of textile materials either for visual identification of a particular **fibre** quality or type of **yarn**, or to enable a printer to see the pattern when applying colourless substances

silesia

lining with a smooth face

NOTE Silesia was originally a plain-weave **fabric**, but now 2/1 or 2/2 **twill weaves** are chiefly used.

silicone finish

polymeric organo-silicone finish normally applied to the surface of textile materials to confer **water repellency** or softness

silk noils

fibres extracted during silk dressing or combing and that are too short for producing spun silk

NOTE These fibres are usually spun on the condenser system to produce what are known as silk-noil **yarns**.

simili binding

SEE under **binding**

simili felling

SEE **simili binding** under **binding**

simplex warp knitting machine

SEE under **knitting machine**

singe

remove unwanted surface **fibres** in a flame, or by infrared radiation, or by burning against a hotplate

NOTE The operation is usually performed as a preliminary to bleaching and finishing.

single-end yarn sizing

application of **size** to textile **yarns** in single-end form during winding from one yarn package to another

single-head loom

narrow-fabric loom that weaves one **piece** only

single marl

SEE under **worsted yarn**

single mottle

SEE under **worsted yarn**

single-phase weaving machine

SEE under **weaving machine**

singles

SEE **single yarn**

single yarn

singles

thread produced by one unit of a spinning machine or of a silk **reel**

sinker

<**weft knitting**> blade that works in conjunction with knitting needles and assists with loop formation and holding down **fabric**

sinnet rope

SEE **braided rope** under **rope**

size

gelatinous film-forming substance, in solution or dispersion, applied normally to **warps** but sometimes to **wefts**, generally before **weaving**, to protect the **yarns** from abrasion in the **healds and reeds** and against one another, to strengthen them and, by the addition of oils and fats, to lubricate them

NOTE The main types are carbohydrates and their derivatives, gelatin and animal glues. Other substances such as linseed oil, polyacrylic acid and polyvinyl alcohol are also used.

skein
SEE **hank**

skew, adj
descriptive of a **fabric** condition in which the **warp** and **weft yarns**, although straight, are not at right angles to one another

skin wool
wool removed from the skins of slaughtered sheep
cf. **slipe**

skirting
<wool> removal of wool, different from the main bulk, from the edges of the fleece

skirtings
<fleece> stained parts of the fleece, such as wool from the legs and the whole edge of the fleece

slack course
<weft knitting> course of knitting made with loops longer than normal for a special purpose, such as linking and running on

slack mercerization
SEE under **mercerization**

sley
SEE **reed**

slide fastener tape
SEE **zip fastener tape**

slipe
lime-steeped wools
cf. **skin wool**

slipper satin
heavy, smooth, high-quality satin made from continuous-filament silk **yarns or manufactured fibre yarns**, and suitable for wedding gowns, evening dresses, evening shoes, and jockeys' blouses

NOTE Slipper satin traditionally has 120 ends per centimetre and enough picks to ensure a well-constructed **fabric**.

slit-film yarn
SEE **tape yarn**

sliver
assemblage of **fibres** in continuous form without twist

slub
abnormally thick place in a **yarn**

slubbing
<carding> fibrous **strands** produced during the stages of preparation for spinning

slubbing
<condenser carding> strips of **web** from a condenser card that have been consolidated into a circular cross section by **rubbing**

slub yarn
SEE under **fancy yarn**

snagging test

test by which woven or knitted **fabrics** are characterized by their tendency to form undesirable surface loops when caught by sharp points

snarl yarn

SEE under **fancy yarn**

snarly yarn**lively yarn**

yarn that shows an excessive tendency to twist round itself if held with insufficient tension

cf. **twist liveliness**

softening

application of a chemical agent or a mechanical process, such as calendering, to give **fabrics** a soft **handle** and frequently a smooth appearance

soft-laid rope

SEE under **rope**

soft waste

cf. note to **waste**

soil release finish**stain release finish**

chemical finish which, when applied to a textile, renders soil and stains easier to remove by ordinary domestic washing

solid colour

SEE under **worsted yarn**

solid woven belting

SEE under **belting**

solvent bonding

method of making **nonwoven fabrics** in which a solvent is used to soften the fibre surfaces in a **web** or **batt** and thus cause bonding between **fibres**

solvent dyeing

dyeing carried out from a continuous non-aqueous phase

sour, verb

treat textile materials in a bath of dilute acid

space dyeing tie-and-dye

production of multicolour **yarns** by the application of various colorants at intervals along a yarn by printing or other methods

NOTE Alternative processes include "knit-deknit", where a knitted tube of **fabric** is printed, fixed and deknitted; the injection of dye-liquor into the inner layers of wound packages (astro-dyed method); and blanking off portions of wound packages before treatment with dye-liquor (Frauchiger method),
cf. **random dyeing**

spin

make a **yarn** or **filament**

cf. **spinning**

spinneret

SEE **spinneret(te)**

spinneret(te)

<entomology> small orifices on filament-spinning insects, in particular, on the lower lip of the silkworm and at the rear of the abdomen in the spider, through which thread-forming material is extruded in the formation of a cocoon, **web**, or other filamentous structure

spinneret(te)

<manufactured fibres> nozzle or plate provided with fine holes or slits through which a fibre-forming solution or melt is extruded in **filament** manufacture

spinning

process(es) used in the production of **yarns** or **filaments**

NOTE 1 The term can be applied to

- a) the **drafting** of, and, where appropriate, the insertion of twist in, assemblies of natural or manufactured **staple fibres** and blends for such fibres to form a yarn;
cf. **cap spinning**, **continuous yarn felting**, **double roving spinning**, **flyer spinning**, **friction spinning**, **hollow-spindle spinning**, **jet spinning**, **mule spinning**, **open-end spinning**, **ring spinning**, **rotor spinning**, **self-twist spinning**, **twistless spinning**, **wrap spinning**
- b) the **extrusion** of filaments by silkworms, spiders, and insects; and
- c) the production of filaments from glass, metals, fibre-forming polymers and ceramics.

NOTE 2 In the spinning of manufactured filaments, fibre-forming substances in the plastic or molten state, or in solution, are forced through the orifices of a **spinneret** or die at a controlled rate (extrusion). There are five general methods of spinning manufactured filaments, but combinations of these methods can be used.

cf. **dispersion spinning**, **dry spinning**, **melt spinning**, **reaction spinning**, **wet spinning**

spinning bath

<reaction spinning> bath containing one set of reactive components into which a solution containing another set of reactive components is extruded during the process of **reaction spinning**

spinning bath

<wet spinning, dispersion spinning> coagulating bath into which a solution or dispersion of a fibre-forming polymer is extruded during the processes of **wet spinning** or **dispersion spinning** respectively

spinning frame

machine consisting of a number of spinning positions for converting **slivers**, **slubbings** or **rovings** into **yarn**

cf. **spinning**

spinning solution

solution of fibre-forming polymer as prepared for **extrusion** through a **spinneret**

spirality

SEE (wale) **spirality**

spiral yarn

SEE under **fancy yarn**

splicing

joining of two **yarns** by **fibre** entanglement, ideally to produce a tailless joint of short length and of similar diameter to the yarns, and therefore smaller than the knot which is the usual alternative

split film

SEE **fibrillated yarn**

splits

two, three, or more widths of **fabric** woven simultaneously and later separated, one or two empty dents usually being left to indicate the cutting line

NOTE Fraying of the edges can be prevented by the use of a leno edge or by other suitable means.
cf. **leno edge** under **selvedge**

split tape
SEE **fibrillated yarn**

spray bonding
method of making **nonwoven fabrics** in which droplets of adhesive are sprayed onto the fibre **web** or **batt**
cf. **adhesive-bonded nonwoven fabric**

spray dyeing
application of colorant to a **substrate** using a spray gun with the object of producing **ombré** effects spray rating test
cf. note to **water repellency**

spring-lay rope
SEE under **rope**

spring needle
SEE **bearded needle** under **needle**

spunbonded fabric
SEE **spunlaid fabric**

spun-coloured
SEE **spun-dyed**

spun-dyed
spun-coloured
descriptive of **yarn** produced with **mass coloration**

spunlaced fabric
SEE **hydroentangled fabric**

spunlaid fabric
spunbonded fabric
nonwoven fabric made by the **extrusion of filaments** which are then laid down in the form of a **web** and subsequently bonded

spun silk
<fabric> SEE **spun silk (fabric)**

spun silk
<yarn> SEE **spun silk (yarn)**

spun silk (fabric)
fabric produced from **spun silk yarn**

spun silk (yarn)
yarn produced by dressing or combing processes from silk waste that has been boiled off to remove most of the gum
cf. note to **schappe silk**

spun yarn
<spinning> manufactured **continuous-filament yarn** that has not yet undergone a **drawing** process

spun yarn
<staple fibre> **yarn** that consists of **staple fibres** held together usually by twist

square heel
<knitting> fully fashioned hose heel composed of two square tabs with their extremities linked together to form a pocket

NOTE Where the heel tabs meet the sole of the stocking, the wales in the foot are at right angles to those in the heel.

stabilized finish

treatment applied to a textile material in order to increase its resistance to dimensional changes in laundering and use

stabilized yarn

set yarn

yarn which has been subjected to a heating and cooling or other **setting** treatment, usually in order to reduce its tendency to shrink, contract, twist, snarl or stretch

NOTE 1 Stabilization or setting can be carried out either as a batch process, for example by steaming packages of yarn in an autoclave, or continuously, by heating and cooling a running yarn.

NOTE 2 In the case of staple yarns and untextured **continuous-filament yarns**, stabilization or setting is usually carried out to reduce shrinkage in subsequent processing or use, or to reduce **twist liveliness**.

NOTE 3 In the case of certain types of textured yarn a second setting or stabilization (post setting) is employed to reduce the stretch or retractive properties of the yarn, while retaining most of its bulkiness. In the case of air-textured yarn, stabilization can be used to modify and set the loop structure.

staining

<colour fastness testing> transfer of colorant from the test material to the adjacent materials

staining

<discoloration> undesirable local discoloration

staining

<textile printing> soiling of whites in the washing process

stain release finish

SEE **soil release finish**

standard atmosphere for testing

<standard temperate atmosphere> prevailing barometric pressure with a relative humidity of 65 % + 2 % and a temperature of 20 °C ± 2 °C

standard atmosphere for testing

<standard tropical atmosphere> prevailing barometric pressure with a relative humidity of 65 % ± 2 % and a temperature of 27 °C ± 2 °C

standard condition for physical testing

<textiles> condition of a textile material when, after having been dried to approximately constant mass in an atmosphere with a relative humidity not higher than 10%, it has been kept in the **standard atmosphere for testing** until it has reached equilibrium

NOTE In cases where the textile material is not likely to lose volatile matter other than water, or to change dimensions, the preliminary drying can be carried out in an oven at 50 °C to 60 °C situated in the standard atmosphere for testing, which is a convenient way of achieving a relative humidity of about 10 %. When the oven is located in a standard tropical atmosphere, an oven temperature of 60 °C to 70 °C is required. Equilibrium with the standard atmosphere for testing can be assumed when successive weighings, at intervals of at least 2 h, show no progressive change greater than 0.25 % in the mass of the textile material.

staple, noun

<fibre length> SEE **staple (length)** under **fibre length**

staple, noun

<fibre testing> mass of **fibres** with a certain homogeneity of properties, usually length

staple, noun

<sampling> lock or tuft of **fibre**, characteristic of a bulk sample, prepared to demonstrate **fibre length**

staple, verb

prepare a tuft

staple diagramSEE **fibre diagram** under **fibre length****staple fibre****fibre** of limited and relatively short length

NOTE Natural staple fibres range in length from a few millimetres (for example cotton linters) up to about 1 m (for example some bast fibres). Manufactured staple fibres are produced over a similar range of lengths. They are normally prepared from extruded **filaments** that have been cut or broken into lengths suitable for the subsequent processing system or end-use; they are also usually crimped.

staple lengthSEE under **fibre length****starch**

carbohydrate extracted from certain plants and used in sizing and finishing

cf. **finish**, verb, **size****stay binding**SEE under **binding****stay tape****narrow fabric** in plain weave, usually with linen **warp** and cotton weft, generally used for stabilizing garments**steeping**<flax straw> process of **retting** flax straw by immersion in an aqueous liquor**steeping**

<generic> treatment of textile material in a bath of liquid, usually, though not necessarily, without continuous or intermittent agitation

steeping

<impregnation> process(es) in which textile materials are impregnated with a liquor, highly squeezed, and then allowed to lie

steeping

<viscose manufacture> process of immersing the dissolving pulp in a solution of caustic soda of mercerizing strength 17 % to 20 %

NOTE The purpose of this treatment is twofold:

- a) to produce alkali-cellulose; and
- b) to remove soluble impurities from the pulp.

The operation is controlled by time and temperature.

stencil printingapplication of colorant to a **substrate** by **brushing** on or spraying through a stencil usually cut in thin sheet metal or waterproofed paper**stenter**, noun**tenter**, nounopen-width, fabric-finishing machine in which the selvages of a textile **fabric** are held by a pair of endless travelling chains that maintain tension

NOTE 1 Attachment can be by pins (pin stenter) or clips (clip stenter).

NOTE 2 Such machines are used for drying, heat setting of thermoplastic material, fixing of **dyes** and chemical **finishes**, chain mercerizing, and controlling of fabric width.**stenter**, verb**tenter**, verbpass **fabrics** through a **stenter**

step number

SEE **move number**

stiffness

resistance offered by a material to a force tending to bend it
cf. **flexural rigidity**

stitch-bonded fabric

sew-knit fabric

multi-component **fabric**, one component of which is a series of interlooped stitches running along the fabric length, the other components of which could be fibre **web** or **batt**, **yarns**, or preformed fabric

NOTE The following are examples of stitch-bonded fabrics:

- a) a fibre web or batt bonded by stitching yarns (for example Arachne, Maliwatt);
- b) cross-laid yarns, with or without machine-direction yarns, bonded by stitching yarns (for example Malimo);
- c) a structure in which either the sewing yarns or other threads lying in the machine direction are taken over **sinkers** to form loop **pile** (for example Araloop, Malipol); and
- d) a structure in which the stitching loops are formed from the **fibres** of the web or batt (for example Arabeva, Malivlies).

stitching damage

damage that occurs to the **fabric** during the stitching or seaming process

NOTE Sewing conditions, the characteristics of the sewing needle, and the fabric being sewn are examples of factors that could contribute to stitching damage.
cf. **seam damage**

stone-washed finish

finish obtained by vigorous tumbling of wet garments, usually made of **denim**, with stones derived from pumice or from synthetic, ceramic materials

straight-bar knitting machine

SEE under **knitting machine**

strand

<generic> linear textile material

strand

<yarn> single, two-fold or multi-fold **yarn** used as a component of a folded or **cabled yarn** or of a **rope**

(straw) tow

flax straw in tossed and broken condition, resulting from threshing a flax crop too poor for normal processing

straw yarn

flat yarn

extruded monofilament yarn that has the cross section and appearance of natural straw

stretch fabric

fabric characterized by greater than normal capacity for stretch and recovery from stretch

NOTE The term is used for materials with greater extension and recovery properties than traditional woven or knitted structures made from conventional **yarns**, and implies the use of stretch yarns, crepe yarns, elastomeric threads, or appropriate finishing treatments. Such fabrics could have different degrees of extensibility and recovery specified for particular uses. Stretch fabrics, so defined, are used particularly for body-conforming garments and for figure-controlling purposes. When the prime requirement is power of recovery, the term **elastic fabric** is preferred.

stretch spinning

<manufactured fibre> production process of spinning in which the extruded **filaments** are substantially stretched at some stage between **extrusion** and collection

stretch yarn

yarn capable of a pronounced degree of stretch and recovery from stretch

NOTE Stretch yarn could consist of conventional yarn treated by certain texturing processes, or of yarns that include an **elastomer** in continuous-filament form.
cf. **textured yarn**

strick

<flax> small bundle of scutched flax of a size that can be held in the hand

cf. **scutching**

strike, noun

<dyeing> uptake of **dye** by a **substrate** from a dyebath in the early stages of dyeing

strike, noun

<wool dyeing> result of the first period of dyeing, especially in wool dyeing

strike-through

<hygiene products> rate at which a liquid passes through the **coverstock** of an absorbent pad

stripe yarn

SEE under **fancy yarn**

structure

<knitted fabric> type, size, pattern and density of intermeshed loops in a warp-knitted or weft-knitted **fabric**

structure

<woven fabric> SEE **weave (structure)**

structured needlefelt

pile fabric formed by a previously needled **web** or **batt** being subjected to a further punching operation with forked, single-barb, or side-hook needles, which produces rib, velour and pattern structures

stuffer

SEE **stuffer (yarn)**

stuffer box

crimping device consisting of a confined space into which a tow, a converted tow, a **sliver**, a **yarn** or a similar assembly of **filaments** or **fibres** is injected by feed rollers or other means such as a fluid jet and in which the fibre assembly is packed and compressed so that the individual filaments or fibres buckle and fold, before withdrawal at a controlled rate

NOTE 1 Multifilament tows are normally passed through a stuffer box after **extrusion and drawing** in order to improve the coherence of the tow. Tows which have been converted are similarly crimped for the same reason and also to improve the subsequent processibility of the fibre.

NOTE 2 A stuffer box is used in the production of some types of **textured yarn**.

stuffer-box texturing

cf. note 1(b) to **textured yarn**

stuffer thread

SEE **wadding thread**

stuffer (yarn)

warp yarn used to give stability to the foundation of a carpet and to support the **pile**

stuffing flock

SEE under **flock**

S-twist

left-handed yarn twist in which the spirals resemble the letter "S"
cf. **twist direction**

ST yarn

SEE **self-twist yarn**

sublimation printing

transfer printing using **dyes** that sublime readily and that have **substantivity** for the **substrate** to which they are applied

sublimation transfer

cf. note to **transfer printing**

substantivity

attraction between a **substrate** and a **dye** or other substance under the precise conditions of test whereby the latter is selectively extracted from the application medium by the substrate

substrate

material, such as **fibre, yarn or fabric**, to which **dyes, pigments** and other substances can be applied and into which they can be absorbed

suint

excretion from the sweat glands of sheep, which is deposited on wool **fibres**

sulfur dye

water-insoluble dye, containing sulfur both as an integral part of the **chromophore** and in attached polysulfide chains, normally applied in the alkaline soluble reduced (leuco) form and subsequently oxidized back to the insoluble form in the **fibre**

surface pile density

ratio of mass to volume of the **pile** of a carpet above the backing

surgical drape

sterilized **fabric** sheet used to cover a person undergoing surgery or to cover sterilized instruments

suture

<surgical gut> thread used to close a wound by sewing

NOTE Monofilament and multifilament sutures are used, with multifilament sutures being twisted or braided in construction. Sutures are sometimes supplied with curved needles swaged onto the ends of a cut length. A variety of natural and synthetic materials are used to impart particular absorption rates in the body or to render the suture nonabsorbable.

swab

<surgical dressing> pad consisting of several layers of absorbent **fabric**, and used to prepare the site of an operation or a wound, to absorb and remove excess blood and body fluids from an incision, and for packing internal body cavities during an operation

NOTE Swabs were traditionally made of woven cotton, but other structures and cellulosic **fibres** are finding application. All swabs are constructed in such a way as to eliminate fraying or linting. Swabs sometimes incorporate X-ray opaque **yarns** or tags to enable them to be located by X-ray examination should they be left in the body.

swansdown

soft, raised **fabric**

NOTE A typical **weave** for a cotton swansdown fabric is the five-end **sateen** with an extra riser added.

swealing

<drying fault> **migration** of **dye** into the angles of folds and creases during **fabric** drying

swealing

<stain removal fault> partial transfer of colour, dirt or grease into the surrounding **fabric**, caused by the unsatisfactory removal of stains by hand from a fabric when an aqueous or solvent treatment is used

NOTE The resulting mark is frequently referred to as a "sweal-mark", "halo", or "ring".

sweal-mark
cf. note to **swealing**

swelling agent
substance that causes the total liquid take-up of a **fibre** to increase

NOTE A swelling agent can be used in a dyebath or a printing paste to promote coloration by the acceleration of the diffusion of **dyes** into a fibre.

synthetic fibre
SEE under **fibre**

tab footing
starting point of a weave

NOTE This is seen in figure 3(a) and figure 3(b) and is known as plain weave "on the tab" and plain weave "on opposite tab" respectively. When two or more weaves are combined to form a stripe, check, or figured design, a better fit of the weaves and a neater edge to the figure is obtained by ensuring that the weaves used are "on the tab" or on the correct "footing" relative to each other.

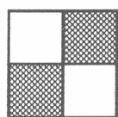


Figure 3(a) — Plain weave on the tab



Figure 3(b) — Plain weave on the opposite tab

Figure 3 — Example of plain weave tab

taffeta
plain-weave, closely woven, smooth and crisp **fabric** with a faint weftwise rib, produced from filament yarns
NOTE 1 The rib effect is produced by making the warp end density greater than the pick density. The warp and **weft yarns** are of similar **linear density**.

NOTE 2 Taffeta belongs to a group of fabrics that have ribs in the **weft** direction. Examples of this group, arranged in ascending order of prominence of the rib, are: taffeta, **poult**, **faill** and **grosgrain**.

NOTE 3 The term "wool taffeta" is often applied to a plain-weave, lightweight fabric produced from **worsted yarns**.

taffeta ribbon
ribbon of continuous-filament yarn in plain weave, with a relatively high **warp** density and a very fine, almost imperceptible rib, generally with a selvedge of contrasting **weave**

tail
length of **yarn** wound onto a cheese or cone at the commencement of winding, that protrudes from the main build-up of yarn, and that can later be attached to the free end of yarn of a second package during magazine creeling
cf. **magazine creel**

tape
<generic> long narrow flat structure with textile-like properties, made of thermoplastic polymer, paper, or other appropriate material

tape
<narrow fabric> single ply **narrow fabric**, usually of plain weave, sometimes knitted, and used in non-load-bearing applications or for the reinforcing of **fabrics** to resist wear and deformation
cf. **webbing**

tapestry
closely woven figured **fabric** of compound structure in which a pattern is developed by the use of coloured **yarns** in the **warp** or in the **weft** or both

tape yarn

slit-film yarn

yarn which comprises a **tape** with a large width-to-thickness ratio, and which has an apparent width not exceeding an agreed upon limit (for example 5 mm or 8 mm)

NOTE Such yarns are usually of paper or are formed by slitting a wide film of (usually) polyethylene or polypropylene polymer into individual tapes, with hot-stretching either before or after slitting to induce high longitudinal strength. The draw ratio in hot-stretching is kept low enough to avoid excessive longitudinal **fibrillation**. The tape yarn so produced is suitable **for weaving**.

tartan

plaid

woollen **fabric** of 2/2 **twill** woven in checks of various colours and worn chiefly by the Scottish Highlanders, each clan having its distinct pattern

NOTE Other materials and **weaves** are now used.

tearing force

tearing strength

average force required to continue a tear previously started in a **fabric**

tearing strength

SEE **tearing force**

teazle

dried seed-head of the plant *Dipsacus fullonum* (Fuller's thistle) used to raise a **pile** or **nap** on certain **fabrics**

NOTE The machine used for this purpose is known as a "teazle gig".

technical textile

textile material or product manufactured primarily for its technical performance and functional properties rather than its aesthetic or decorative characteristics

NOTE The following is a non-exhaustive list of end-uses: aerospace, industrial, marine, medical, military, safety, transport, and geotextiles.
cf. **industrial textile**

temple

device used in **weaving** to hold the **fabric** at the **fell** as near as possible to the width of the **warp** in the **reed**

temporary set

SEE under **setting**

tensile strength

SEE **breaking strength**

tensile strength at break

breaking force

tensile force recorded at the moment of rupture

NOTE The tensile strength and the tensile strength at break might be different if, after yield, the elongation continues and is accompanied by a drop in force resulting in tensile strength at break being lower than tensile strength.

tensile test

test in which the resistance of a material to stretching in one direction is measured

NOTE The tearing test is not regarded as a tensile test.

tension

uniaxial force tending to cause the extension of a body or the balancing force within that body to resist extension

tenter

SEE **stenter**

terry

uncut loops in **fabric**

NOTE The term has become widely synonymous with woven Turkish towelling.

terry fabric

warp-pile fabric in which loops are created, without positive assistance, by variation of the relative positions of the **fell** and the **reed**

NOTE A high tension is applied to the ground **warp** and a very low tension to the **pile** warp.

tex

basic unit of the **tex system**, which is the mass, in grams, of one kilometre of the product

tex system

system of expressing **linear density of fibres, filaments, slivers, and yarns**, or of other linear textile material

NOTE The basic unit is tex. Multiples and submultiples recommended for use in preference to other possible combinations are as follows:

- a) kilograms per kilometre, designated kilotex (ktex);
- b) decigrams per kilometre, designated decitex (dtex); and
- c) milligrams per kilometre, designated millitex (mtex).

textile

woven **fabric**

NOTE The terms "textile" and the plural "textiles" are now also applied to **fibres, filaments** and **yarns**, natural and manufactured, and most products of which these are a principal raw material.

textile film

manufactured textile material in film form within which molecular orientation is predominantly in the longitudinal direction

textured yarn**jet-textured yarn**

continuous-filament yarn that has been processed to introduce durable **crimps**, coils, loops or other fine distortions along the length of the **filaments**

NOTE 1 Most, but not all, texturing methods depend upon the thermoplastic properties of suitable **manufactured fibres**. The following principal texturing procedures are or have been used:

- a) **yarn** is highly twisted, thermally set and untwisted as a continuous process (false-twist texturing);
- b) yarn is fed through a nip into a **stuffer box** - the yarn can be preheated or the stuffer box can be heated (stuffer-box texturing);
- c) yarn is injected with a plasticizing jet of hot fluid (usually hot air, sometimes steam) into a texturing tube or nozzle (hot-fluid jet texturing);
- d) yarn is plasticized by passage through a jet of hot fluid and then by being impacted onto a cooling surface (impact texturing);
- e) heated yarn is passed over a knife-edge (edge crimping);
- f) heated yarn is passed between a pair of gear wheels or through some similar device (gear crimping);
- g) yarn is knitted into a **fabric** that is thermally set and then unravelled (knit-deknit, KDK texturing);
- h) yarn is over-fed through the turbulent air stream inside a jet assembly so that entangled loops are formed in the filaments; this method can also be applied to non-thermoplastic yarns (air-jet texturing; air-texturing); and
- i) yarn is composed of **bicomponent fibres** of asymmetric cross section and is subjected to a hot or wet process whereby differential shrinkage occurs.

NOTE 2 Procedures (a) and (e) in note 1 above give yarns of a generally high-stretch character. This is frequently reduced by thermally resetting the yarn in a state where it is only partly relaxed from the fully extended condition, which produces a **stabilized yarn** with the bulkiness little reduced but with a much reduced retractive power.

thermally bonded nonwoven fabric

textile **fabric** composed of a **web** or **batt of fibres** containing heat-sensitive material, bonded by the application of heat, with or without pressure

NOTE The heat-sensitive materials could be in the form of fibres, **bicomponent fibres** or powders.
cf. **calender bonding**, **point bonding**, **powder bonding**

thermal setting

SEE **setting**

thermofixation

SEE **baking**

thin-walled fibre

<cotton> **fibre** which does not fall into either the "normal" or the "dead" category
cf. **dead fibre**, **maturity**, **normal fibre**

thread, noun

<generic> textile **yarn**

thread, noun

<silk> component of silk **yarn**

thread, noun

<yarn preparation> result of twisting together, in one or more operations, two or more single or **folded yarns**

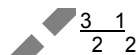
thread, verb

pass **sliver**, **yarn** or **fabric** over, under or through an element

thread interlacing

<weaving> arrangement of the **warp** and **weft** over and under one another

NOTE The normal method of denoting an interlacing is to show the movement of a warp thread over and under weft threads thus:



which indicates warp passing over three, under two, over one, and under two weft threads. It is sometimes more convenient to describe a **weave** in terms of weft interlacings, in which case,



indicates the weft passing under three, over two, under one and over two warp threads.

threads per unit length

<woven fabric> number of picks in a specified length of **fabric**

NOTE 1 The traditional unit of length has been the inch, but the value is now expressed as "threads per centimetre" although the actual count could be made over 1 cm, 2.5 cm, 5 cm, or 10 cm, according to the nature of the fabric.

NOTE 2 Counting can be carried out at the following stages of manufacture:

- In the loom: the location of the count should be agreed upon. It is usually taken between the **fell** of the fabric and the take-up roller, with the fabric under **weaving** tension.
- Loomstate: the count is taken after the fabric has been removed from the loom and is relaxed from weaving tension, but before it is subjected to any further treatment that might modify the fabric dimensions.
- Finished: the count is taken when no further processing in the **piece** is contemplated.

threads per unit width

<woven fabric> number of ends in a specified width of **fabric**

NOTE 1 The traditional unit of width has been the inch, but the value is now expressed as "threads per centimetre" although the actual count could be made over 1 cm, 2.5 cm, 5 cm, or 10 cm, according to the nature of the fabric.

NOTE 2 Counting can be carried out at the same stages as for **threads per unit length**.

3D fabric

technical textiles> three-dimensional structure used as a reinforcement in composite materials, consisting of three mutually orthogonal matrices of closely spaced parallel **yarns**

throw

twist or turn

NOTE This term is of Germanic and Anglo-Saxon origin, and is used especially in the silk and **manufactured fibre** industries to describe the twisting or folding of **continuous-filament yarns**.

ticket number

<sewing thread> number that indirectly indicates the range of the nominal thread **linear density** value
cf. note 3 to **sewing thread**

ticking

fabric used for mattress covers, pillows, etc.

tie-and-dye

SEE **space dyeing**

tinsel yarn

textile **yarn** or thread, combined, coated, or covered with a shiny substance, often metallic
cf. **metallized yarn**

tinting

<dyeing> production of a pale colour in dyeing

tinting

<printing> SEE **sighting**

tippy wool

wool in which the tip portions of the **fibres** have been so damaged by **weathering** during growth as to have markedly different dyeing properties

tog

unit of measure of thermal insulation used to quantify the thermal insulation of garments, bedding, etc.

NOTE The SI unit of thermal insulation is the square metre kelvin per watt ($\text{m}^2 \cdot \text{K/W}$). In order that the thermal resistance of clothing can be described in small integers, the practical unit, the tog, is one tenth of the fundamental unit. Thus: 1 tog = $0.1 \text{ m}^2 \cdot \text{K/W}$.

top

<drawing> **sliver** that forms the starting material for the **worsted** and certain other **drawing** systems, and usually obtained by the process of combing

NOTE 1 It is ideally characterized by the following properties:

- a) the absence of **fibres** so short as to be uncontrolled in the preferred system of drawing;
- b) substantially parallel formation of the fibres; and
- c) substantially homogeneous distribution throughout the sliver of fibres from each length-group present.

NOTE 2 Tops are usually produced by **carding** and combing, or by preparing and combing on worsted machinery, but recent years have seen the introduction of top-making by the cutting or controlled breaking of continuous-filament **tows of manufactured fibres**, and the assembly of the resultant **staple fibres** into slivers in a single machine.

NOTE 3 The advent of manufactured fibres has meant the introduction of staple-fibre top into the flax, jute, spun silk, and other drawing systems.

top

<packaging> form or package in which **sliver** is delivered, for example ball top or bump top
cf. **oil-combed top**

top dyeing

dyeing of wool or other **fibres as stubbing** or **top** in package form

Topham box

device for twisting and winding a wet-spun **continuous-filament yarn** so as to produce a **cake**

NOTE Yarn is supplied through a reciprocating guide on the axis of a rotating hollow cylinder and is collected on the inner surface of the cylinder by centrifugal force. Thus, the cake is wound from its outside inwards.

touch and close fasteners

hook-and-loop fasteners

fasteners consisting of two opposed **tapes** which can be closed repeatedly by the application of pressure and be pulled apart manually

NOTE The fastening mechanism can be formed by minute hooks on the surface of one tape which interlock with minute loops on the face side of the second tape, or by a loop tape locking with mushroom-shaped protuberances on the face side of the other tape. Typically, fasteners are made of polyamide, polyester or polypropylene.

tow

<flax> SEE **(straw) tow**

tow

<hemp> substantially clean **fibre** of less than scutched length

tow

<manufactured fibre production> essentially twist-free assemblage of a large number of substantially parallel **filaments**

tow-to-top conversion

SEE **converting**

tow-to-top converting

SEE **converting**

transfer printing

process by which a design is transferred from one **substrate**, usually paper, to another

NOTE Several techniques have been used, such as melt transfer, film release, and wet transfer, but vapour transfer (sublimation transfer) is the most important. Select disperse dyes transfer in vapour form to thermoplastic fibres when the printed paper and fabric are brought into close contact in a calender or press at 170°C to 220°C.

traveller

metal or plastics component through which **yarn** passes on its way from the ballooning eye to the package surface in **ring spinning** or twisting
cf. **ring spinning**

triaxial weaving

system of **weaving** that interlaces two sets of **warp** ends and one set of picks in such a way that the three sets of threads form a multitude of equilateral triangles, resulting in a **fabric** that has excellent bursting, tearing and abrasion resistance

trick

<knitting> slot for preserving the spacing of **knitting elements**

tricot warp knitting machine
SEE under **knitting machine**

trimming

narrow fabric generally used for the purpose of decorating or adorning furnishing **fabrics** or clothing, but often fulfilling a utilitarian function

tristimulus values

amounts of three defined primaries (usually blue, red and green) required to be mixed additively to match the colour of the object, under defined conditions

trouser binding
SEE **kick tape**

trouser braid

flat, usually black, braided **narrow fabric** with closely interlaced threads at the sides and more open interlacing in the centre, and with a core thread on each side of a more loosely constructed centre

NOTE It is usually made from continuous-filament yarn and used on men's formal dress.

truth mark

identification mark applied close to the ends of a **piece of fabric** by various means, such as **weaving** in a contrasting colour of yarn, using a marker pen, and punching in a logo

NOTE The purpose of the mark is to show that the piece has remained intact between processes or between mill and customer.

tulle

<lace> fine, soft, very lightweight, machine-made net with hexagonal mesh
cf. note 2 to **plain net**

tulle, woven
SEE **woven tulle**

Turkish towelling
cf. note to **terry**

tweed

fabric made in a wide range of weights and qualities from woollen-spun **yarns** in a variety of **weave effects** and **colour-and-weave effects**
cf. note 2 to **woollen**

NOTE The term originally referred to a coarse, heavyweight, rough-surfaced wool fabric for outerwear, woven in Southern Scotland.

twill

<fabric> SEE **twill (fabric)**

twill

<weaving> SEE **twill (weave)**

twill (fabric)

<fabric> **fabric** produced in **twill weave**

NOTE 1 The diagonal lines produced on the surface of a fabric by a twill weave are often referred to as the twill in such phrases as a "prominent twill", a "**broken twill**" and an "unwanted twill".

NOTE 2 Unwanted twill might arise as a defect in satin fabrics, the intensity of the unwanted twill depending on the fabric structure, the weave, and the number of ends per dent in the **reed**.

twill (weave)

<weaving> **weave** that repeats on three or more ends and picks and produces diagonal lines on the face side

twine

<cordage> twisted **cordage** less than 4 mm in diameter

twine

<yarn> SEE **bullion cord**

twist, adj

SEE under **worsted yarn**

twist, noun

condition of a **yarn** or similar structure when the component elements have a helical disposition such as results, for instance, from relative rotation of the yarn ends

NOTE 1 A yarn can be twisted by down twisting, **false twisting**, **open-end spinning**, **self-twist spinning**, **two-for-one twisting** or **uptwisting**.
cf. **ring twisting**

NOTE 2 For all practical purposes, twist is measured in turns per unit length.

twist, verb

SEE **fold, verb**

twist direction

direction to which the twist in the **yarn** conforms when viewed vertically cf. **S-twist**, **Z-twist**

twist factor

twist multiplier

number (or value) given by the product of the twist level in a **yarn** (turns per unit length) and the square root of the **linear density** on the **tex system**

NOTE 1 The twist factor is directly related to the angle of twist helix the surface **fibres** have in a yarn for the same packing density. The higher the twist level, the greater is the helix angle and the larger the twist factor.

NOTE 2 The purpose of the twist factor is to calculate the level of twist to use in spinning in order to maintain the same angle of twist helix and similar yarn characteristics when the **yarn linear density** is changed.

NOTE 3 Twist factor can also be applied to **ravings** and **plied yarns**.

twistless spinning

system of **yarn** formation that relies on the use of a permanent or temporary adhesive to bond **fibres** together

NOTE 1 When temporary adhesive is used it is removed during fabric finishing, and the yarn (and fabric) strength is then obtained through lateral pressure produced by the interlacings in the **fabric**. A similar fabric construction can be achieved by using **wrap-spun yarns** which have been produced with a soluble **binder**.

NOTE 2 Fibres can be bonded with an adhesive onto a filament **core** to form a yarn.

twistless yarn

yarn without twist

cf. **continuous yarn felting**, **flat yarn**, **twistless spinning**, **wrap-spun yarn**, **zero-twist yarn**

twist level

amount of twist per unit length of a **yarn**

twist liveliness

tendency of a **yarn** to twist or untwist spontaneously

cf. **snarly yarn**

NOTE 1 Examples of effects that can be caused by twist liveliness include snarling of yarns during processing and spirality in knitted **fabrics**.

NOTE 2 The direction of twist liveliness or torque, S or Z, is that of the twist change that takes place spontaneously when an end of yarn or hanging loop is allowed to rotate freely.

twist multiplier
SEE **twist factor**

twist-on-twist
descriptive of **folded yarn** in which the direction of the folding twist is the same as that of the single twist

twist selvedge
SEE under **selvedge**

twist set
dead twist
set twist
condition of a **yarn** in which an unbalanced twisting or untwisting torque has been dissipated or rendered latent by suitable treatment such as steaming

twist setting
cf. note to **setting**

twist yarn
cf. note 2 to **twist** under **worsted yarn**

two-for-one twisting
system which inserts two turns of twist for each revolution of a twisting element

NOTE This is achieved by inserting one turn of twist between a stationary feed package and a rotating disc and a further turn between the latter and a balloon guide.

tyre yarn
yarn that is used in the manufacture of the textile carcass of rubber tyres

U %
measure of the mass variability per unit length of **yarn**

NOTE It is statistically equivalent to the percentage mean deviation and is often approximately equal to 0.8 % coefficient of variation provided that the mass variations are normally distributed.

UDY
SEE **undrawn yarn**

ultra-fine fibre
<generic> SEE **microfibre**

ultra-fine microfibre
<generic> SEE **microfibre**

underlap
<warp-knitted **fabric**> connection between stitches in consecutive courses

underlap
<**warp knitting**> lateral movement of the guide bar made on the side of the needle behind the hook or beard

undrawn yarn
UDY
extruded **continuous-filament yarn** that has not been subjected to a **drawing** process

NOTE 1 This term is usually restricted to such yarns, the component macromolecules of which have a low degree of orientation, although **POY** can be described as undrawn yarn.

NOTE 2 Undrawn yarn represents an intermediate stage in the production of some synthetic-fibre yarns.

NOTE 3 Some undrawn filament yarns produced from liquid crystal polymers have a very high degree of orientation.

union fabric

fabric made from **warp** of one kind of **fibre** and **weft** of another

union yarn

yarn made by twisting together yarns of different **fibres**

(unmedicated) absorbent gauze

plain-weave cotton **gauze** that is well bleached and highly absorbent

unwanted twill

cf. note 1 and note 2 to **twill (fabric)**

uptwisting

system of twisting one or more **yarns** by withdrawing them over-end from a rotating package

NOTE 1 If more than one yarn is to be twisted, the yarns are first assembly-wound onto a single uptwister supply package.

NOTE 2 Uptwisting forms the second stage in two-stage twisting.

NOTE 3 Uptwisting is sometimes used to indicate the insertion of additional twist in a yarn, irrespective of method.

usable width

width of a **fabric** that can be utilized

van Dyke braid

ric-rac braid with the points at the edges forming an acute angle

vapour transfer

cf. note to **transfer printing**

vat dye

water-insoluble dye, usually containing keto groups, and which is normally applied to the **fibre** from an alkaline aqueous solution of the reduced enol (leuco) form, which is subsequently oxidized in the fibre to the insoluble form

velour, woven

SEE **woven velour**

velveteen

cut-weft **pile fabric** in which the cut **fibres** form the surface of the **fabric**

NOTE This effect is produced by cutting the **weft** floats after **weaving**.
cf. **fustian**

velvet, woven

SEE **woven velvet**

Venetian fabric

<cotton> eight-end warp-faced satin, usually mercerized and shreinered, used as a lining **fabric**

Venetian fabric

<wool> warp-faced satin, in five-end **satin weave** or modified satin weave, and made from woollen or **worsted** **warp** and woollen **weft**, milled, lightly raised, and cropped to reveal a fine, steep **twill**

viscosity

internal resistance to flow of a fluid

cf. **fluidity**

voile

lightweight, approximately square-sett, open-textured, plain-weave **fabric** made from fine **voile yarns**

NOTE Voile is woven with one thread per dent unless the number of ends per unit length is so high as to render this impossible.

voile yarn

single or **plied yarn** of sufficiently high twist to produce a round, compact **yarn**

wadding

lofty sheet of **fibres**, which might be bonded, and used for **padding**, stuffing, or packing

wadding thread

padding thread

stuffer thread

additional **warp** or **weft** used in a **fabric** for the purpose of increasing its mass, bulk, or firmness, or the prominence of the design, and that is not visible on the face side

waffle piqué

cf. note to **woven pique**

(wale) spirality

<weft knitting> distortion of a circular-knitted **fabric** in which the wales follow a spiral path round the axis of the tube

NOTE Spirality is caused by the use of **yarn** that is twist lively, the direction and degree of spirality being determined by the direction and degree of **twist liveliness**.

warp, noun

<fabric> threads lengthwise in a **fabric** as woven

warp, noun

<threads> number of threads in long lengths and approximately parallel, in various forms intended for weaving, knitting, doubling, sizing, dyeing, or lace-making

warp, verb

arrange threads in long lengths parallel to one another preparatory to further processing

NOTE In addition to beaming, the following methods of warping are practised: ball warping, cross-ball warping, and chain warping. The primary stage of these methods of warping is the withdrawal of the ends from a warping creel and their assembly in **rope** form, a form that can conveniently be used for wet processing. For convenience of handling, this rope can be

- a) wound into a ball (ball warping),
- b) machine-wound onto a wooden roller into a cross-ball cheese (cross-ball or cheese warping), or
- c) shortened into a link chain (chain warping).

A number of these ropes can be assembled into a complete warp on a beam in a dressing frame, or can be split and dressed and incorporated in warps made by other methods.

cf. **section warping**

warp-backed fabric

woven **fabric** that contains two sets of **warp** threads and one set of **weft** threads

NOTE One warp and the weft together form the face, while the second warp is laid at the back of the fabric and is stitched into it at intervals so as to form one structure, without distorting the surface appearance.

warp-knitted fabric

fabric composed of knitted loops in which the **yarns** forming the loops travel in a warpwise direction down the length of fabric generally parallel to the selvage

NOTE The two sides of the fabric are referred to as the technical face (the side on which the knitted loops are prominent) and the technical back (the side on which the **underlaps** are prominent).

warp knitting

method of making a **fabric** by normal knitting means in which the loops made by each **warp** thread are formed substantially along the length of the fabric

NOTE It is characterized by the fact that each warp thread is fed more or less in line with the direction in which the fabric is produced.

warp knitting machine

SEE under **knitting machine**

warp rib

effect obtained by **weaving** two or more picks as one and by using a warp **cover factor** approximately twice the **weft** cover factor, so that the **warp** is made to bend round the weft, which remains substantially straight

NOTE This leads to the formation of rounded warp-faced **cords** that run across the **fabric**.
cf. **poplin**, **taffeta**

warp shed

SEE **shed**

warp yarn

yarn intended for use as **warp**

washing off

treatment of textile material in water or detergent solution to remove residual substances from preceding treatments

waste

wool waste

by-products of processes in the manufacture of **yarns**

NOTE There are two classes of waste, known as "hard" and "soft", and their treatment differs according to the class. Hard waste is essentially that from spinning frames, reeling and winding machines and all other waste of a thready nature. Soft waste comes mainly from earlier processes where the **fibres** have little or no twist, and are neither felted nor compacted.

water penetration resistance

ability of a **fabric** to withstand penetration by water in specified circumstances

NOTE 1 Water can be under pressure (for example hydrostatic head test) or in the form of drops hitting the surface of the fabric.

NOTE 2 Different test methods are used to test different aspects of water penetration resistance and **water repellency**, and the test method used might not simulate the effects experienced in use.

waterproof, adj

descriptive of the ability of **fabric** to be fully resistant to penetration by water

NOTE The term is an absolute term and implies that the water penetration resistance of the fabric is equivalent to its hydraulic bursting strength.

water-quench

cf. note to **quench**

water repellency

relative degree of resistance of a **fabric** to surface wetting, water penetration, water absorption, or any combination of these properties

NOTE The term is used in relation to tests carried out with several very different pieces of apparatus and, therefore, the same parameters are not involved in every case (for example Bundesmann test, Wira shower test, spray rating test).

water-repellent, adj

descriptive of a state characterized by the non-spreading of a globule of water on a textile material

NOTE The term is not normally applied to a water-repellent finish impervious to air: this is generally referred to as **waterproof**.

wave braid

braid similar to **ric-rac braid**, which has a curved S-shaped construction

wave shed weaving machine

multiphase weaving machine with different parts of the **warp** sheet in different phases of the weaving cycle at any instant

NOTE This type of shed makes it possible for a series of **weft** carriers or **shuttles** to move along in successive sheds in the same plane. When the weft carriers or shuttles travel a circular path through the weave **shed**, the machines are generally referred to as "circular weaving machines" or "circular looms".

weathering

<fabric failure> discoloration, disintegration, etc. that results from **weathering**

weathering

<generic> action of atmospheric agencies or elements on substances exposed to them

weathering test, artificial

SEE **artificial weathering test**

weave

SEE **weave (structure)**

weave effect

distinctive effect developed in a **fabric** by the **weave**

NOTE **Twill** and **honeycomb** are examples of weave effects.

weave, plain

SEE **plain weave**

weave repeat

smallest number of ends and picks on which a **weave** interlacing pattern can be represented

weave (structure)

structure

pattern of interlacing of **warp** and **weft** in a woven **fabric**

weaving

producing **fabric** by the interlacing of **warp** and **weft** threads

weaving machine

loom

machine used **for weaving**

multiphase weaving machine

weaving machine in which several phases of the working cycle take place at any instant so that several picks are inserted simultaneously

NOTE The main types of multiphase weaving machines are wave shed weaving machines and parallel shed weaving machines.

single-phase weaving machine

weaving machine in which the **weft** is laid across the full width of the **warp** sheet in a single phase of the working cycle

NOTE the main types of single-phase weaving machines are as follows:

- a) machines with shuttles, i.e. hand looms, non-automatic weaving machines and **automatic weaving machines**; and
- b) **shuttleless weaving machines**.

web

<carding> sheet of fibres delivered by a card (card web) or by a comber (comber web)

web

<knitted fabric> plain, circular-knitted **fabric**

web

<nonwoven fabric> SEE **batt**

web

<woven narrow fabric> woven narrow **fabric**

NOTE The web is often specific to woven elastic.

webbing

woven **narrow fabric**, generally with multiple plies, the prime function of which is load bearing

weft

thread running widthwise in a **fabric** as woven

weft-backed fabric

woven **fabric** that contains one set of warp threads and two sets of weft threads

NOTE The warp and one weft together form the face, while the second weft is laid at the back of the fabric and is stitched into it at intervals so as to form a single structure, without distorting the surface appearance.

weft bobbin

SEE **pirn**

weft detector

electronic device for

- a) monitoring the presence of weft during **weaving**, normally on **shuttleless weaving machines**,
- b) monitoring the time of arrival of the weft on relay **air-jet weaving machines**, and
- c) indicating that the weft on a **pirn** in the **shuttle** is becoming exhausted

NOTE **Weft forks** and **feeler motions** are mechanical devices which achieve the same objective.

weft fork

mechanical device for monitoring the presence of weft during **weaving**, normally on **shuttle looms**
cf. **weft detector**

weft knitting

method of making a **fabric** by normal knitting means in which the loops made by each **weft** thread are formed substantially across the width of the fabric

NOTE It is characterized by the fact that each weft thread is fed more or less at right angles to the direction in which the fabric is produced.

weft knitting machine

SEE under **knitting machine**

weft rib

effect produced by **weaving** two or more ends as one and by using a weft **cover factor** approximately twice the **warp** cover factor, so that the **weft** is made to bend round the warp, which remains substantially straight

NOTE This leads to the formation of rounded weft-faced **ords** that run down the fabric.

weft stop motion

device for stopping a **weaving machine** in the event of a **weft** break

weft yarn

yarn intended for use as **weft**

weighting

<cotton> treatment of cotton fabric with water-soluble salts to increase fabric mass without imparting a stiffening effect

weighting

<silks> addition of metallic salts or other compounds to the **fabric** to increase the mass and bulk, and to impart a firmer **handle**

welt

cf. note to **woven pique**

welting cord

cord consisting of two or more **gimps** twisted together

welt, woven

SEE **woven welt**

wet-back

return flow of liquid through the **coverstock** from an absorbent pad used in hygiene products

wet cleaning

aqueous process for cleaning articles made from materials liable to be damaged by dry-cleaning solvents

wet-laid nonwoven fabric

fabric made from a **fibre** sheet formed by wet laying, normally followed by adhesive bonding

NOTE The material can contain a high percentage of non-textile fibres, such as wood pulp.

wet laying

process of forming a **fibre** sheet by papermaking techniques, for **nonwoven fabric** production

cf. **wet-laid nonwoven fabric**

wet processing

aqueous treatment of textile materials

NOTE Bleaching, dyeing, printing and finishing are examples of wet processing.

wet spinning

conversion of a dissolved polymer into **filaments by extrusion** into a coagulating liquid

NOTE The extrusion could be directly into the coagulating fluid, or through a small air-gap. In the latter case, it could be known as "dry-jet wet spinning" or "air-gap wet spinning".

wet transfer

cf. note to **transfer printing**

whipcord

fabrics of a wide range of qualities and commonly made from cotton or **worsted yarns**

NOTE The characteristic feature is more or less bold upright warp twill (often a 63° steep twill), which is accentuated by a suitable **weave**, more ends per unit length than picks, and a clear **finish** to an extent which causes the **twill** or the **warp** threads to form a cord-like effect.

wick

woven or braided **fabric, or a yarn** or a group of yarns, with outstanding capillary properties

wicking

penetration of liquids, under the influence of capillary forces, along or through a textile material or the textile element of a **coated fabric**, or along interstices formed by the textile element and the coating polymer of the coated fabric

width, fabric

SEE **fabric width**

wincey

lightweight **fabric** of the **flannel** type, finer in texture than baby flannel

winceyette

lightweight **fabric**, originally of cotton, raised on one or both sides, the **weave** usually being plain or **twill**

NOTE Winceyette is used chiefly for children's and women's nightdresses.

Wira shower test

cf. note to **water repellency**

wire

<pile weaving> metal strip or rod that is inserted, during **weaving**, between raised pile **warp** threads and the foundation of a **fabric** to form loops of **pile** above the foundation

NOTE The strip or rod is either "bladed" (a small blade on the upper edge of the strip at one end) so that when it is withdrawn, the loops are severed to form a cut pile, or "unbladed", so that a loop pile is left on withdrawal of the wire. It can be rounded (for the production of "**cord**" carpets) or flat (for Brussels and Wilton carpets).

wire profile

wire used to form loops in Wilton carpet **weaving**

NOTE It is characterized by a profile that varies in height along its length, and is used for the production of **pile** loops of different height across the width of the carpet.

wool

cf. note to hair, note 1 to **woollen**

wool broadcloth

dark-coloured **fabric** made from fine woollen **yarns** in a **twill weave**, heavily milled, and given a **dress-face finish**

NOTE Wool broadcloth is traditionally milled from an approximately 230 cm width in the loom for a 140 cm finished width.

wool classing

wool grading

process by which whole fleeces are separated into different classes or grades before being baled and sold

wool grading

SEE **wool classing**

woollen

descriptive of **yarns**, or **fabrics** or garments made from yarns, which have been produced on the condenser system, wholly from wool **fibres**, new or otherwise

NOTE 1 As an adjective appertaining to wool generally, the term "wool" and not "woollen" is recommended.

NOTE 2 The trade term "woollen-spun" is applied to staple yarn produced by **carding**, condensing, and spinning on machinery originally designed for the processing of wool into yarn. It is descriptive of processing technique and not of fibre content. Since the yarn might not contain any wool fibre, the alternative "condenser spun" is preferable.

woollen blended

SEE **blended woollen**

woollen carding

SEE under **carding**

woollen-spun

cf. note 2 to **woollen**

wool sorting

process by which fleece wool or skin wool is divided up into various qualities

wool taffeta

cf. note 3 to **taffeta**

wool waste
SEE **waste**

worsted, adj

descriptive of **yarns** spun wholly from combed wool in which the **fibres** are reasonably parallel, and of **fabrics** or garments made from such yarns
cf. **worsted-spun**

worsted blended
SEE **blended worsted**

worsted carding
SEE under **carding**

worsted fabric

fabric manufactured wholly from **worsted** yarns, except that decoration threads of other **fibres** might be present

worsted-spun

descriptive of yarn spun from **staple fibre** processed on **worsted** spinning machinery by **carding** or preparing, combing, and **drafting**; or by converting a continuous-filament tow and drafting; or from a combination of **slivers** or **rovings** from both systems

NOTE This definition is descriptive of processing technique and not of **fibre** content.

worsted yarn

<generic> **yarn** produced by the **worsted** system

double marl

descriptive of yarn which has been produced from a **roving** of one end of two colours (as in **single marl**) twisted with one end of another two colours that have been roved together
cf. **roving**

NOTE The expression "colour" includes black and white.

half-marl

descriptive of **yarn** which has been produced from a **roving** of one end of **mixture** shade or solid colour, twisted with one end of two colours (as in **single marl**)

NOTE The expression "colour" includes black and white.

ingrain

SEE **mixture** under **worsted yarn**

mixture, adj

ingrain

descriptive of **yarn** made from **fibres** of two or more colours blended together

NOTE The expression "colour" includes black and white.

single marl

descriptive of **single yarn** which has been produced from a **roving** of two different colours

NOTE The expression "colour" includes black and white.

single mottle

descriptive of **single yarn** made as a **single marl** in respect of colour combination, but with the marl effect being obtained by spinning from two half-weight **rovings** of different colours into the single end, giving a sharper contrast of colour than in a single marl

NOTE The expression "colour" includes black and white.

solid colour

descriptive of **yarn** made from **fibres** of a single colour

NOTE The expression "colour" includes black and white.

twist

descriptive of **yarn** comprising two single ends of different colours twisted together, the single ends being either solid colours or **mixture** shades

NOTE 1 The expression "colour" includes black and white.

NOTE 2 In woollen spinning, a twist yarn is known as a marl yarn.

woven cloqué

compound or double **fabric** with a figured blister effect brought about by the use of **yarns** of different character or twist, which respond in different ways to finishing treatments

woven crêpe

SEE under **crêpe fabric**

woven double cloth

compound fabric in which the two component **fabrics** are held together by centre-stitching, self-stitching or interchanging

NOTE 1 In centre-stitching, a special series of stitching threads, lying between the two fabrics, are interlaced alternately with them and thus bind them together.

NOTE 2 In self-stitching, threads from one fabric interlace with threads from the other (for example by taking a back **warp** thread over a face weft thread).

NOTE 3 In interchanging, the two fabrics are so woven as to interchange with each other.

(woven) filet net

net woven in such a way that the **yarns** are locked at the intersections

woven label

length of **narrow fabric** woven on a **jacquard** loom, incorporating names, logos or text to identify the article to which the label is attached, and to give instructions and other details

NOTE Woven labels can be produced on **narrow-fabric** looms or be slit from a **fabric**.

woven piqué

plain-weave **fabric** with sunken lines between rounded **cords** and with a plain-weave face

NOTE When the cords are in straight lines across the fabric, the structure is known as "welt" and when they create waved lines it is known also as "waffle piqué" or "marcella".

woven plush

pile fabric with a longer and less dense **pile** than that of velvet

cf. **woven velvet**

woven tulle

very fine net **fabric** made in plain weave from silk **yarns**

woven velour

<napped fabric> napped-surface woven **fabric** or felt in which the surface **fibres** are laid in a single direction to present a smooth appearance

woven velour

<pile fabric> heavy **pile fabric** with the **pile** laid in a single direction

woven velour

<terry fabric> terry **fabric** that has had the tops of the loops cut off in a process subsequent to **weaving**

woven velvet

cut warp-pile **fabric**, originally of silk, in which the cut ends of the **fibres** form the surface of the fabric

NOTE This effect is produced

- a) from a pile warp lifted over **wires** and cut,
- b) from a pile **warp** lifted over wires which are withdrawn to cut the **pile**, or
- c) by **weaving** two fabrics face to face with the pile ends interchanging from one fabric to the other. The pile ends are cut by a knife while still in the loom, giving separate **pieces** of velvet,
cf. **woven plush**

woven welt

fabric showing rounded **cords** in the **weft** direction, with pronounced sunken lines between them that are produced by the nature of the **weave**

wrap reel

device for preparing **yarn** hanks of predetermined circumference and number of turns, before testing for **linear density** by weighing

NOTE The pre-tensioned yarn wraps round a reel consisting of a number of bars (usually six, in a hexagonal array), set parallel to and equidistant from an axle round which the assembly rotates in order to wind on the yarn. The reel can be hand driven or motor driven; a revolution counter is usually required.

wrap spinning

SEE **hollow-spindle spinning**

wrap-spun yarn

yarn with a twistless **core** wrapped with a **binder** and normally produced by **hollow-spindle spinning**

wrap yarn

<plating> **yarn** used in embroidery plating or wrap striping

wrap yarn

<yarn structure> fibrous **yarn** covered with other yarn(s) to bind projecting **fibre** ends to the main body

wrinkle-free finish

SEE **crease-resistant finish**

yarn

product of substantial length and relatively small cross section, and consisting of **fibre(s)** or **filament(s)** with or without twist

NOTE Assemblies of fibres or filaments are usually given other names during the stages that lead to the production of yarn, for example **tow**, **slubbing**, **sliver** or **roving**. Except in the case of **continuous-filament yarns** or **tape yarns**, any tensile strength possessed by assemblies at these stages is generally the minimum that can hold them together during processing.

yarn count

SEE **count of yarn**

yarn evenness

variation in mass per unit length of **yarn** along the length of the yarn

cf. *U* %

yarn linear density

SEE **count of yarn**

yarn number

SEE **count of yarn**

yarn sizing, single-end

SEE **single-end yarn sizing**

yarn slippage

unwanted movement of **yarns** in a woven **fabric** due to the **warp** and **weft** **yarns** slipping over each other

NOTE 1 Yarn slippage might occur during garment manufacture, or in garment components during wear, as a result of excessive stress or abrasion.

NOTE 2 Yarns in a fabric have a greater or lesser tendency to slip depending on factors such as type, **weave**, ends and picks per unit length, fabric weight, and the type of finishing process.

yellowing

<discoloration caused by oil> SEE **oxidized oil staining**

yellowing

<generic discoloration> yellow discoloration that might develop on textile materials during processing, use or storage

zephyr

fine **fabric** of plain weave used for dresses, blouses and shirtings, and made in various qualities

NOTE A typical zephyr has coloured stripes on a white ground and exhibits a cord effect made by the introduction of coarse threads at intervals.

zero-twist yarn

<continuous-filament yarn> continuous-filament **single yarn** in which there is no twist

zero-twist yarn

<folded yarn> multi-folded **yarn** in which there is no folding twist

NOTE 1 Some fibrous yarns are described as twistless, since the **fibres** might be held together by adhesive temporarily, for example until incorporated in **fabrics**. Varieties of **core-spun yarn** and scaffolding yarn have appeared with this description after solvent-removal of one component.

NOTE 2 Zero-twist **continuous-filament yarns** usually become partially twisted by over-end withdrawal, for example from a **pirn** in a loom shuttle.
cf. **twistless yarn**

zip

zip fastener

zipper

fastening device operating by means of two parallel rows of metal or plastics teeth on either side of a closure, which are interlocked by a sliding tab

NOTE The teeth are carried in two **zip fastener tapes** that run the length of the zip and that are usually stitched into apparel and other textile products.

zip fastener

SEE **zip**

zip fastener tape

slide fastener tape

zipper tape

zip tape

narrow fabric which has a high lateral strength, and which can be woven or knitted, being so constructed as to provide, at one selvedge, for the suitable embodiment of the fastener elements
cf. **zip**

zipper

SEE **zip**

zipper tape

SEE **zip fastener tape**

zip tape

SEE **zip fastener tape**

Z-twist

right-handed yarn twist in which the spiral slants like the middle part of the letter "Z" cf. **twist direction**

Bibliography

Working Group to identify and acknowledge useful literature used in the preparation of this standard.

SANS 10004:2015, *Terms and definitions for textiles and textile merchandise*

ASTM 123:2017, *Standard Terminology Relating to Textiles*

የኢትዮጵያ የደረጃዎች ኤጀንሲ Ethiopian Standards Agency



Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010. ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1998.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational institutions, research institutes, government organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes. Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed in from our website.

ESA has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of ESA.

International Involvement

ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the international Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM). It is a founding member of the African Regional Organization for standardization (ARSO).

More Information?

Contact us at the following address.

The Head Office of ESA is at Addis Ababa.

☎ 011- 646 06 85, 011- 646 05 65

☎ 011-646 08 80

✉ 2310 Addis Ababa, Ethiopia

E-mail: info@ethiostandards.org,

Website: www.ethiostandards.org



Standard Mark