

INTRODUCTION

The '*Glossary*', brought to you by bedandbathdepot.com is a comprehensive dictionary on important aspects of the fabric/textile industry with a focus on Home Textiles.

It includes definitions of the most widely used terms related to fibers, yarns, fabrics, weaves, processes, etc., presented with images for better & practical understanding. It's a practical guide for anyone & everyone associated with textiles.

If you need any further help or information, write to us at :-

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INDEX

(Click to Navigate)

1. Fibres

A. Categories of Fibres

- a) Natural Fibres
- b) Synthetic Fibres
- c) Man - Made Fibers
- d) Hollow Fibres
- e) Short Staple Fibre
- f) Long Staple Fibre

B. Types of Fibres

- a) Cotton
- b) Polyester
- c) Flax
- d) Silk
- e) Modacrylic
- f) Viscose
- g) Wool
- h) Nylon

C. Types of Yarns

- a) Blends
- b) Thread
- c) Carded
- d) Combed
- e) Ply
- f) Twist

INDEX

(Click to Navigate)

2. Fabrics

A. Types of Fabrics

- a) Woven
- b) Knitting
- c) Non-Woven
- d) Linen
- e) Jute
- f) Spandex- Lyocell (Lycra)
- g) Damask
- h) Chenille
- i) Velvet
- j) Laminated Fabric
- k) Black Out
- l) Double Cloth
- m) Coated Fabrics
- n) PU Fabrics
- o) Quilting
- p) Interlining
- q) Wadding
- r) Greige
- s) Peach

INDEX

(Click to Navigate)

B. Types of Weaves

- a) Plain
- b) Satin
- c) Sateen
- d) Crepe
- e) Twill
- f) Terry
- g) Percale
- h) Single Pick
- i) Double Pick

C. Other Terms

- a) Warp
- b) Weft
- c) Pick
- d) Width
- e) Selvedge
- f) Fabric Construction
- g) Elongation

3. A. Machines

- a) Handloom
- b) Power Loom
- c) Rapier Loom
- d) Air-jet Loom
- e) Water-jet Loom
- f) Dobby
- g) Reed
- h) Jacquard
- i) Pick Glass

INDEX

(Click to Navigate)

B. Processes

- a) Dyeing
- b) Yarn Dyed
- c) Piece Dyed
- d) Bleaching
- e) Embossing
- f) Brushing

- g) Water Proof
- h) Water Repellant
- i) Shrinkage
- j) Finished Fabric
- k) Wash Cycle

C. Other Terms

- a) Count
- b) Thread Count
- c) Fabric Count

1. Fibres

A. Categories of Fibres

a) Natural Fibers :

Natural raw materials that grow in nature from which cloth is made. Major natural fiber's are Cotton, Flax, Silk & Wool.



b) Synthetic Fibers :

Trade group of man-made fibers which are made by chemical synthesis or the "building up" of chemical compounds through the interaction of one or more simple chemical compounds. It includes such types as nylon, polyester, olefin, acrylic, vinyl, and vinylidene chloride. Although sometimes loosely applied to all man-made fibers it generally is regarded as not applicable to rayon or acetate, the former being regenerated cellulose and the latter being a cellulose compound, cellulose acetate.



c) Man - Made Fibers :

The overall generic term which includes those filaments (fibers) that are manufactured as opposed to those fibers that grow in nature (natural).

Classification:

- 1) **Cellulosic** (derived from plant cellulose): rayon , acetate and triacetate.
- 2) **Non-cellulosic** (chemical synthesis-synthetics):
 - a) **General purpose fibers**: Nylon, acrylic, modacrylic, polyester.
 - b) **Special purpose fibers**: Glass, aramid, novoloid, olefin, saran, rubber, anidex, metallic, vinyon.

d) Hollow Fiber :

Manufactured, continuous filament, fibers, having voids created by introduction of air, or other gas in the polymer solution, or melt spinning through specially designed spinnerets.



e) Short Staple Fibre :

A classification for any cotton with staple from 3/8 to 1 inch (0.95 to 2.54 cm) long. Short staple cottons are usually of Indian or Asiatic origin or of certain botanical varieties.

f) Long Staple Fibre :

A long fiber, in reference to cotton, long staple indicates a fiber length of not less than 1-1/8 inches. In reference to wool, the term indicates fiber 3 to 4 inches long suitable for combing.



B. Types of Fibers

a) Cotton :

A unicellular, natural fiber composed of almost pure cellulose. As taken from plants, the fiber is found in lengths of 3/8 to 2 inches for marketing, the fibers are graded and classed for length, strength, and color.



b) Polyester :

A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85% by weight of an ester of dihydric alcohol and terephthalic acid (FTC definition). The polymer is produced by the reaction of ethylene glycol and terephthalic acid or its derivatives. Fiber forms produced are filament, staple, and tow.



c) Flax :

A slender annual plant, *Linum usitatissimum*, the bas fiber which is called linen. The soft fiber is obtained from the stalks by retting scotching and hackling; it is from 12 to 14 inches (30 to 102cm) long, capable of fine subdivision, flexible and very strong, it has a pronounce luster but it is somewhat lacking in elasticity.



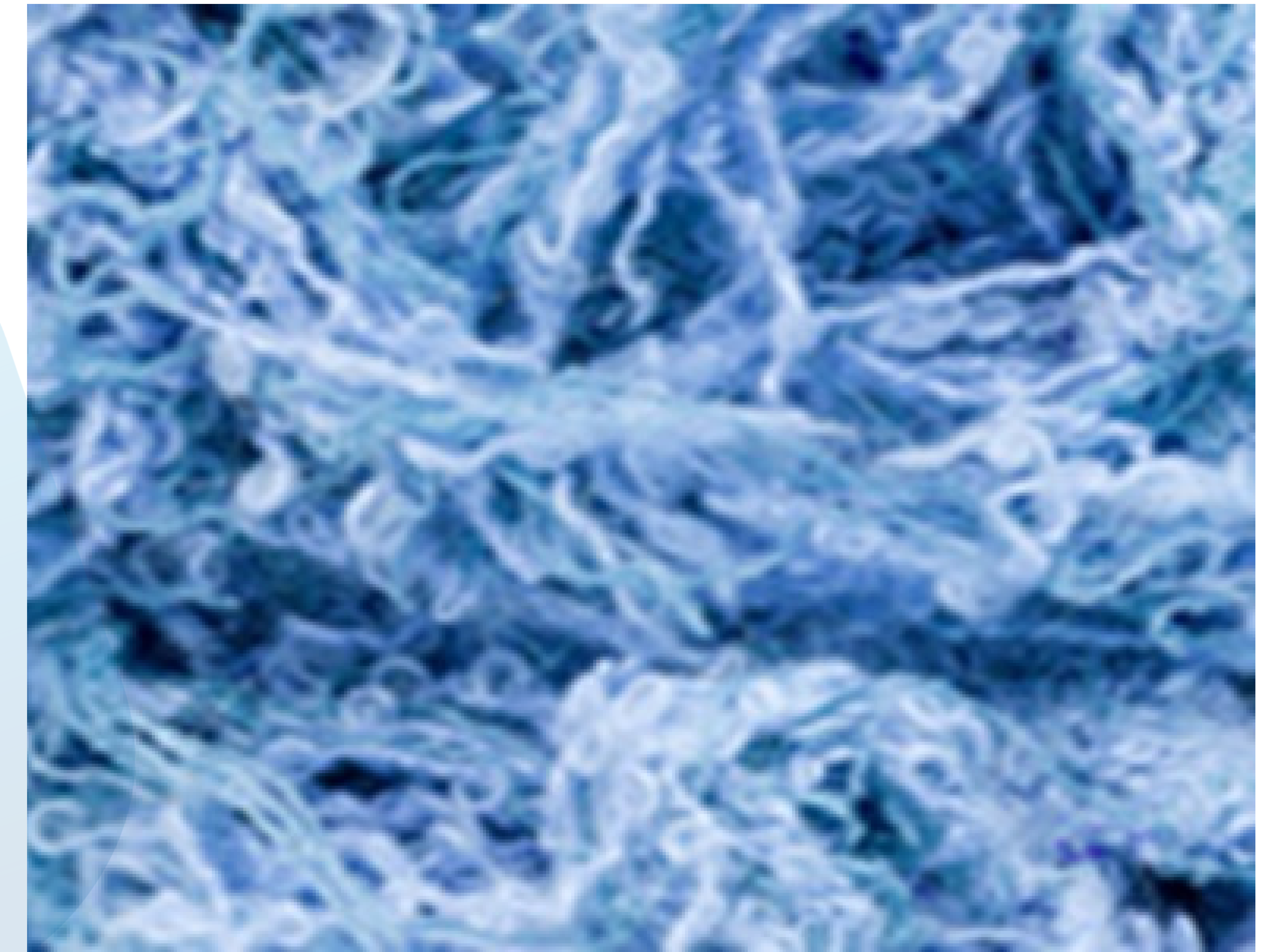
d) Silk :

A fine, strong, continuous filament produced by the larva of certain insects, especially the silkworm, when constructing its cocoons. Silk is noted for its resiliency, aesthetics, elasticity & strength.



e) Modacrylic :

Fiber A manufactured fiber in which the fiber forming substance is any long chain synthetic polymer composed of less than 85% but at least 35% by weight of acrylonitrile units (FTC definition). Both wet and dry spinning are used.



f) Viscose :

One type of rayon. It is produced in far greater quantity than cup ammonium rayon, the other commercial type.



g) Wool :

The fiber from the fleece of the sheep or lamb or hair of the Angora or Cashmere goat (and may include the so-called specialty fibers from the hair of the camel, alpaca, llama, and vicuna) which has never been reclaimed from any woven or felted wool product .



h) Nylon :

A manufactured fibre in which the fibre forming substance is any long chain synthetic polyamide having recurring amide groups (-NH-CO-) as an integral part of the polymer chain (FTC definition). The two principal nylons are nylon 66, which is polyhexamethylenediamine adipamide, and nylon 6, which is polycaprolactam.



C. Types of Yarns

a) Blends :

A strand composed of two or more different kinds of fibers combining their respective, desirable features. Wool may be blended with staple polyester in order to obtain the draping quality of wool and to approach the strength and abrasion resistance of the polyester.



b) Thread :

Thread is a tightly twisted ply yarn used for joining, creating or decorating textiles. It is a raw material for giving desired shape to a garment and holding the basic parts together by creating seam.



c) Carded :

A cotton yarn that has been carded but not combed. Carded yarns contain a wider range of fiber lengths and, as a result, are not as uniform or as strong as combed yarns. They are considerably cheaper and are used in medium and course counts.



d) Combed :

Combed yarns are produced by adding another step of yarn spinning, namely combing, which aligns the fibers and removes the short fibers carried over from the previous step of carding. Combed yarn results in superior-quality fabrics.



e) Ply :

The number of single yarns twisted together to form a plied yarn, or the number of plied yarns twisted together to form a cord. Consisting of two layers, made by employing two sets of warp and two sets of filling as double cloth or or other fabrics which been combined in two layers.



f) Twist :

The number of turns about its axis per unit of length of a yarn, or textile strand. Twist is expressed as turns per inch (tpi), turns per meter (tpm) or turns per centimeter (tpc).

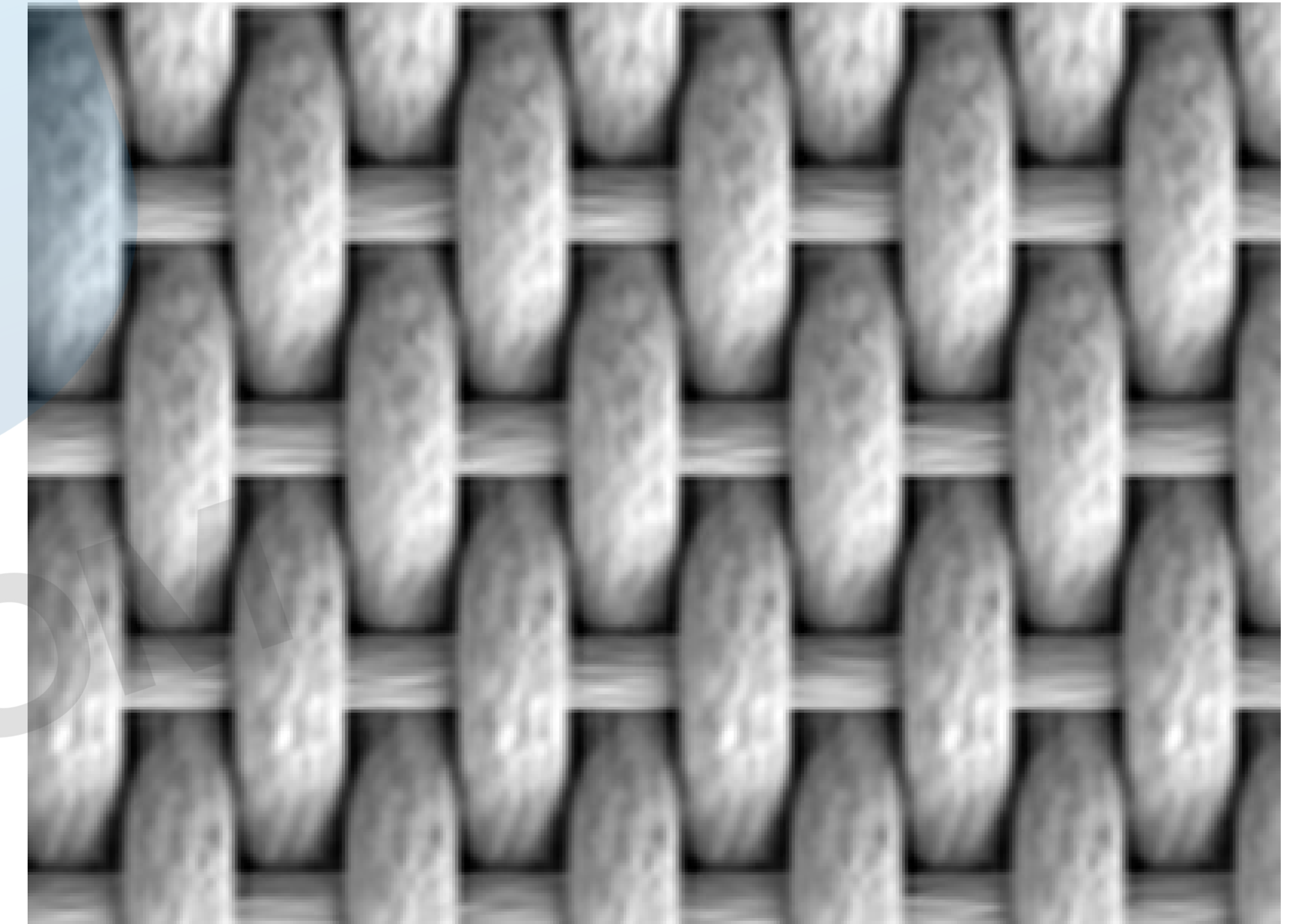


2. Fabrics

A. Types of Fabrics

a) Woven :

Interlacement of warp and weft yarn. Technically, a woven fabric is any fabric made by interlacing two or more threads at right angles to one another. Woven fabrics can be made of both natural and synthetic fibres, and are often made from a mixture of both.



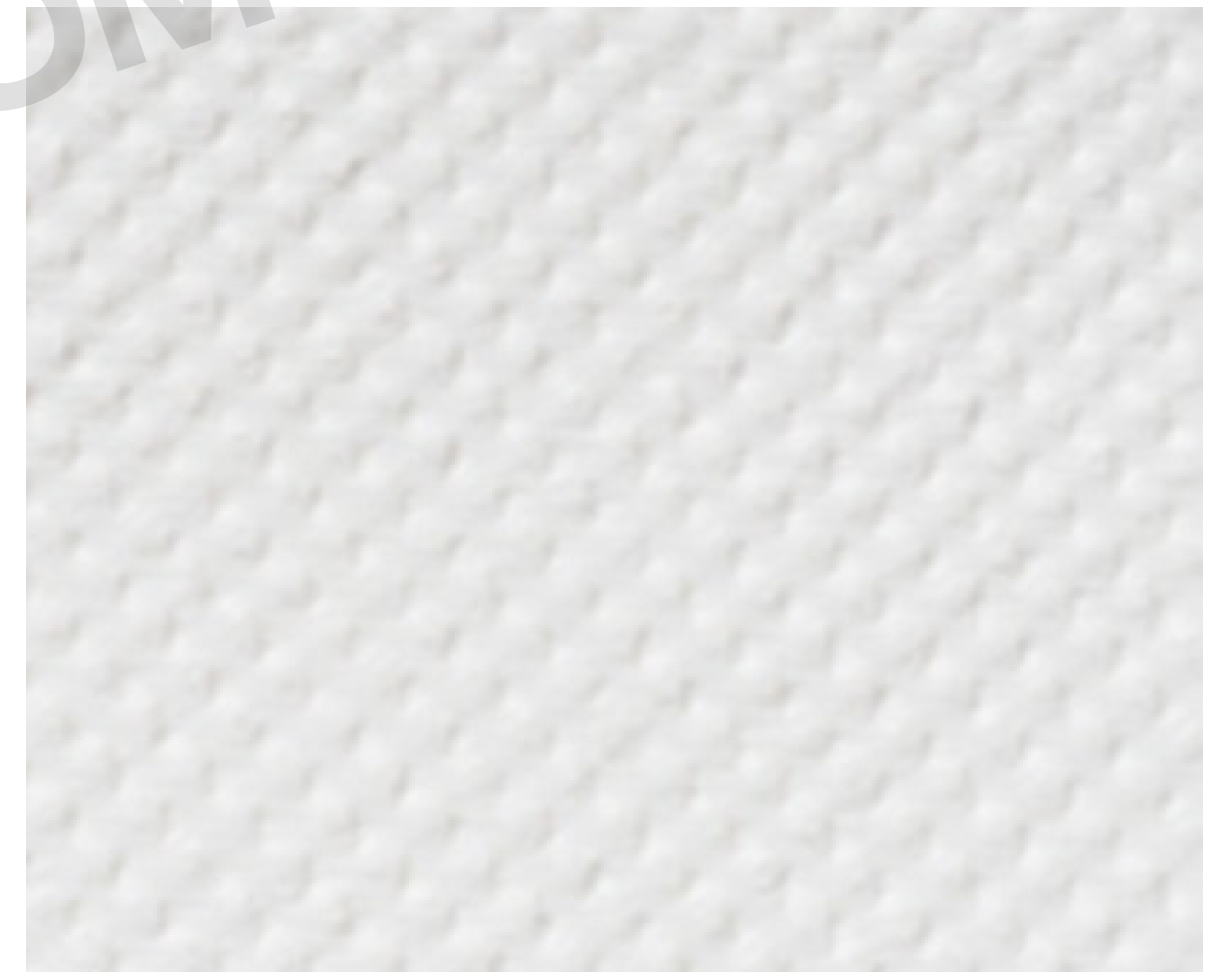
b) Knitting

Inter looping of the wales and coarse in vertically and horizontally.



c) Non-Woven :

Fabrics made directly from individual fibers that are matted together by forming an interlocking web of fibers either mechanically (tangling together) or chemically (gluing, bonding, or melting together).



d) Linen :

Cellulosic fibers derived from the stem of the flax plant or a fabric made from these fibers. Linen fibers are much stronger and more lustrous than cotton; they yield cool, absorbent fabrics that wrinkle easily. Fabrics with linen-like texture and coolness but with good wrinkle resistance can be produced from manufactured fibers and blends.



e) Jute :

A bast fiber used for sacking, burlap, and twine as a backing material for tufted carpets.



f) Spandex- Lyocell (Lycra) :

A manufactured fiber in which the fiber-forming substance is a long chain synthetic polymer composed of at least 85% of a segmented polyurethane (FTC definition).



g) Damask :

A patterned design produced on jacquard loom.



h) Chenille :

A yarn with a fuzzy pile protruding from all sides, cut from a woven chenille weft fabric. Chenille yarns are made from all fibers, and they are used as filling in fabrics and for embroidery, fringes, and tassels. Fabric woven with chenille yarn.



i) Velvet :

A warp pile fabric with short, closely woven cut pile which gives the fabric a rich, soft texture. Two methods are used for weaving velvets:

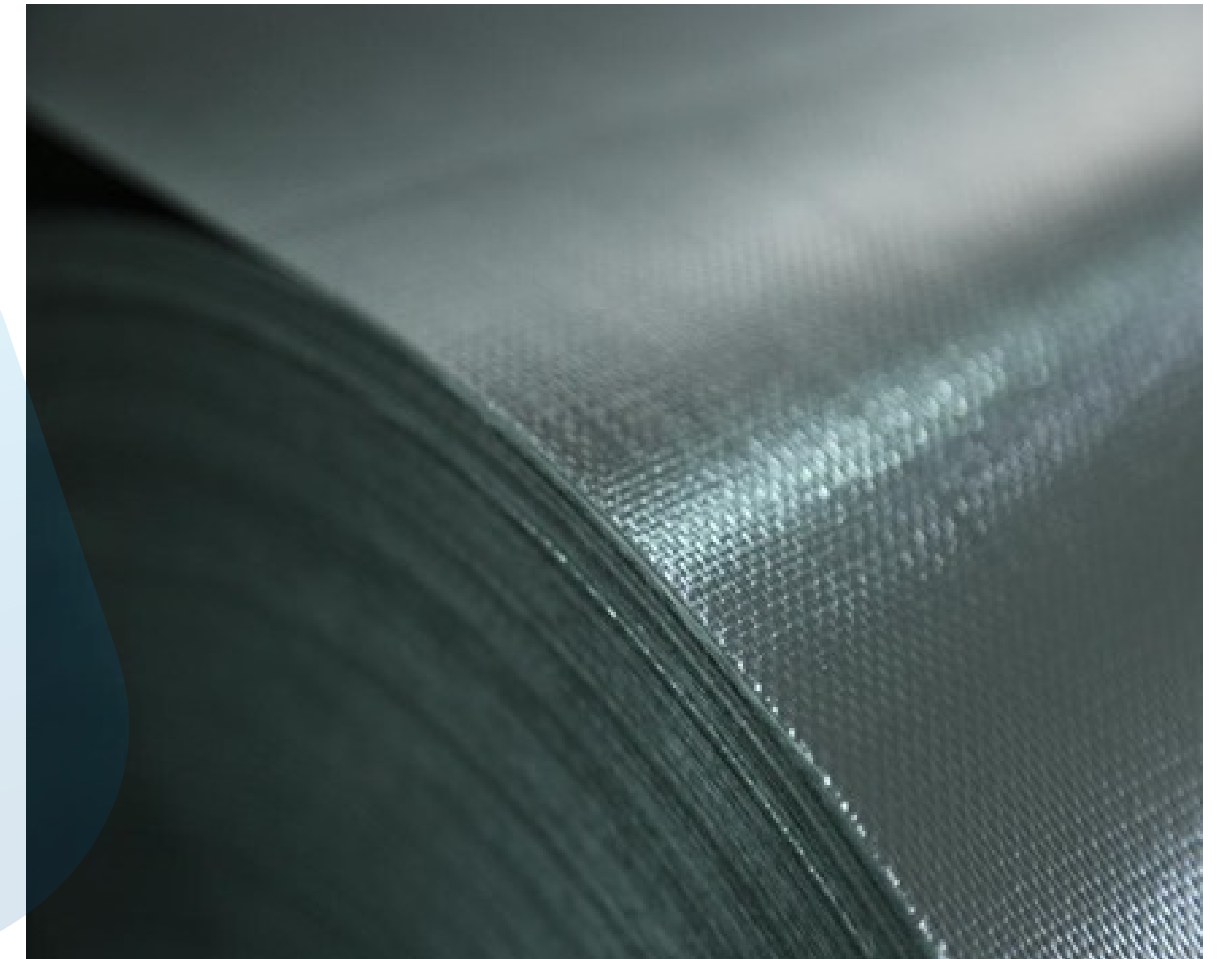
- (1) a double-cloth weave, with two cloths woven face to face and the pile ends interchanging between the two; these pile ends are cut on the loom by a reciprocating knife blade to produce two separate pieces of velvet;
- (2) Pile ends are lifted over cutting wires which are inserted in the same manner as the filling and cut the pile as the wire is withdrawn.

Pile was originally made of silk but now also in cotton, man-made fibers, etc., and combinations of these fibers.



j) Laminated Fabric :

A Layered fabric made by bonding layers of fabric together by heat sealing or cold adhesive sprays.



k) Black Out :

Blackout refers to foam-backed fabric used to blackout light. Blackout fabrics are most commonly found in hotel rooms as curtains or drapery fabrics, blocking much of the light would otherwise enter through a window when the curtains are closed. For third shift workers, a parent of babies' blackout is an essential element in the bedroom. Besides window coverings, other uses of blackout fabrics include industries, movie projector screens and planetarium domes.



l) Double Cloth :

A fabric construction in which two fabrics are woven at the same time, one on top of the other. In the weaving process, the two layers of woven fabric are held together using binder threads. The woven patterns in each layer of fabric can be similar or completely different.



m) Coated Fabrics :

A fabric to which a substance such as lacquer, plastic, resin, rubber, or varnish has been applied in firmly adhering layers to provide certain properties, such as water impermeability.



n) PU Fabrics :

It is a waterproof fabric, typically polyester, but may be cotton or a polyblend material that has been heat-laminated to a polyurethane layer. It is lightweight and extremely durable. These fabrics are used in several industries, from medical companies to the manufacture of diapers and active wear.



o) Quilting :

A fabric construction consisting of a layer of padding, frequently down or fiberfill, sandwiched between two layers of material and held in place by stitching or sealing in a regular pattern across the body of the composite. The process of stitch bonding a batting or composite.



p) Interlining :

An insulation, padding, or stiffening fabric, either sewn to the wrong side of the lining or the inner side of the outer shell fabric. The interlining is used primarily to provide warmth in coats, jackets, and outerwear.



q) Wadding :

A loose, fibrous substance, which may be in the form of a sheet or lap, usually prepared sheets of carded cotton. Uses: Stuffing, Padding, Garments, upholstery, packing and similar purposes.



r) Greige :

An unfinished fabric just off the loom or knitting machine.



s) Peach :

It's called peaching because it's supposed to make the fabric feel like the fur on a peach. This process gives a fabric a nice, soft feel and makes it more comfortable to wear.



B. Types of Weaves

a) Plain :

One of the three fundamental weaves: plain, satin, and twill. Each filling yarn passes successively over and under each warp yarn, alternating each row.



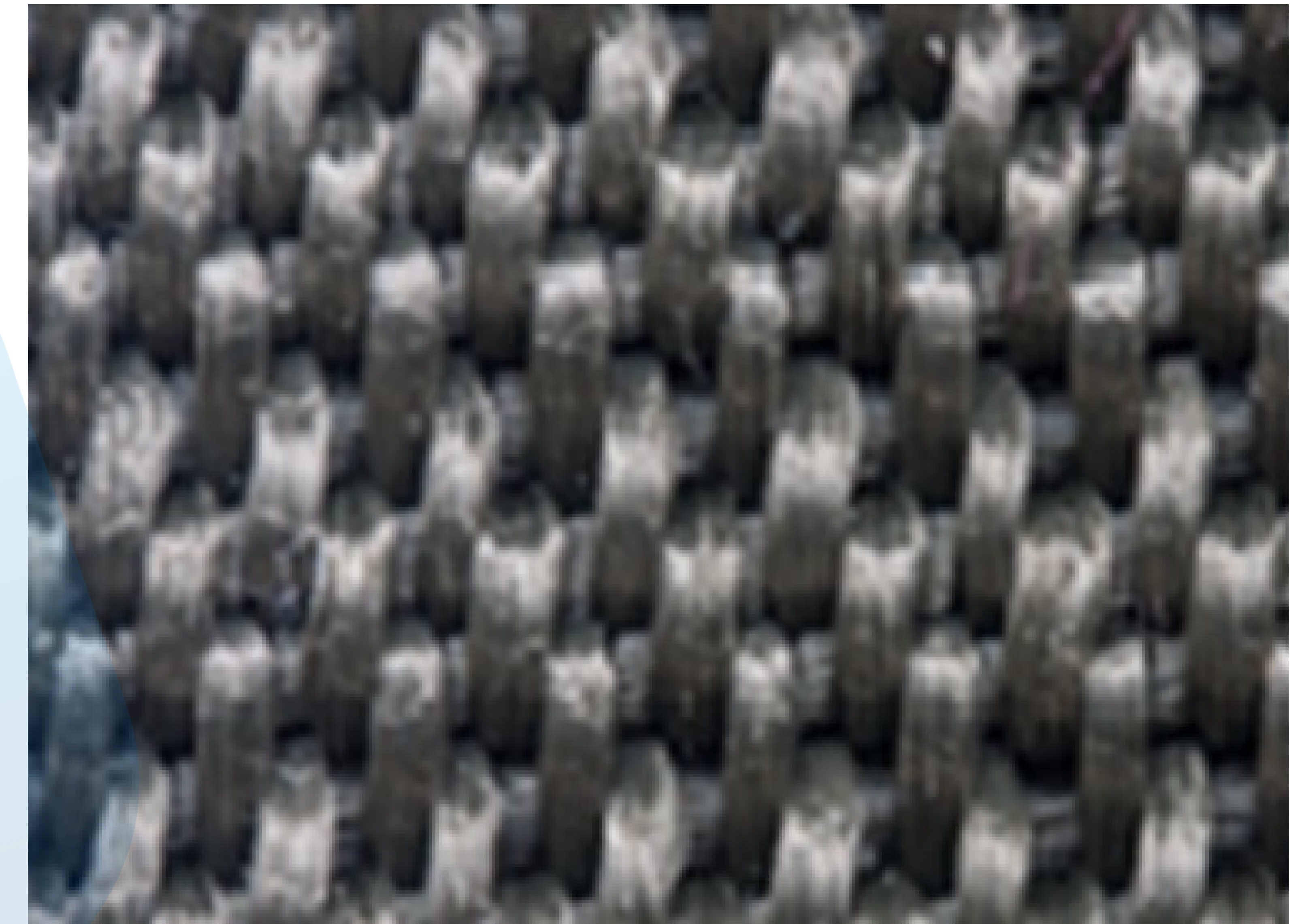
b) Satin :

A satin fabric with an unusually high luster because of the application of very heavy roll pressure in finishing. Panné satin is made of silk or one of the manufactured fibers.



c) Sateen :

A cotton fabric made in a satin weave. The dense weave, sheen and softer feel of sateen is produced through the satin weave structure.



d) Crepe :

A lightweight fabric characterized by a crinkling surface obtained by the use of:

- (1) hard-twist filling yarns.
- (2) chemical treatment.
- (3) crepe weaves.
- (4) embossing.



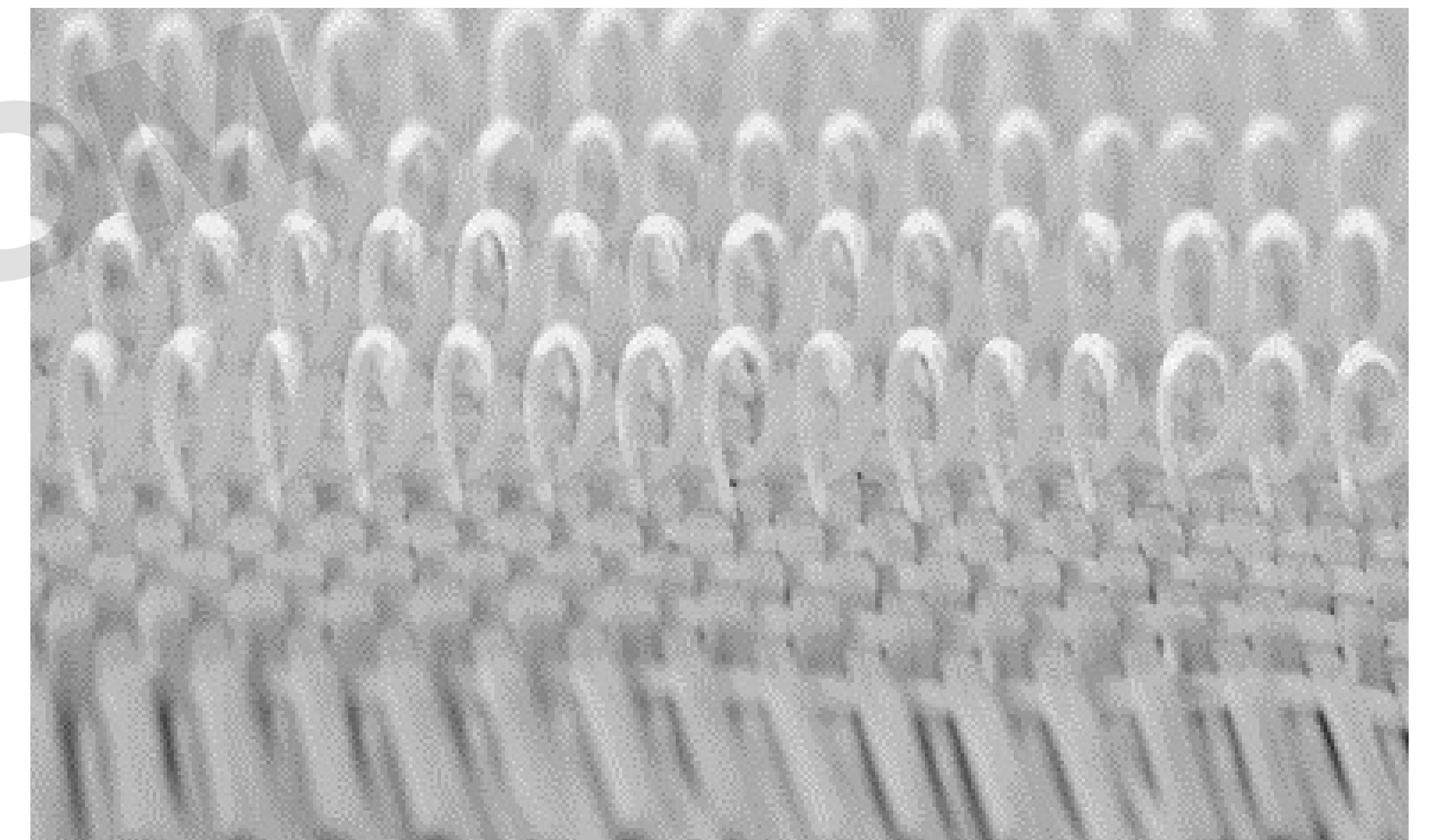
e) Twill :

A textile weave in which the filling threads pass over one and under two or more warp threads to give an appearance of diagonal lines.



f) Terry :

One of the uncut loops that form the pile of a fabric. A pile fabric, usually woven of cotton, with uncut loops on one or both sides, used for bath towels and robes.



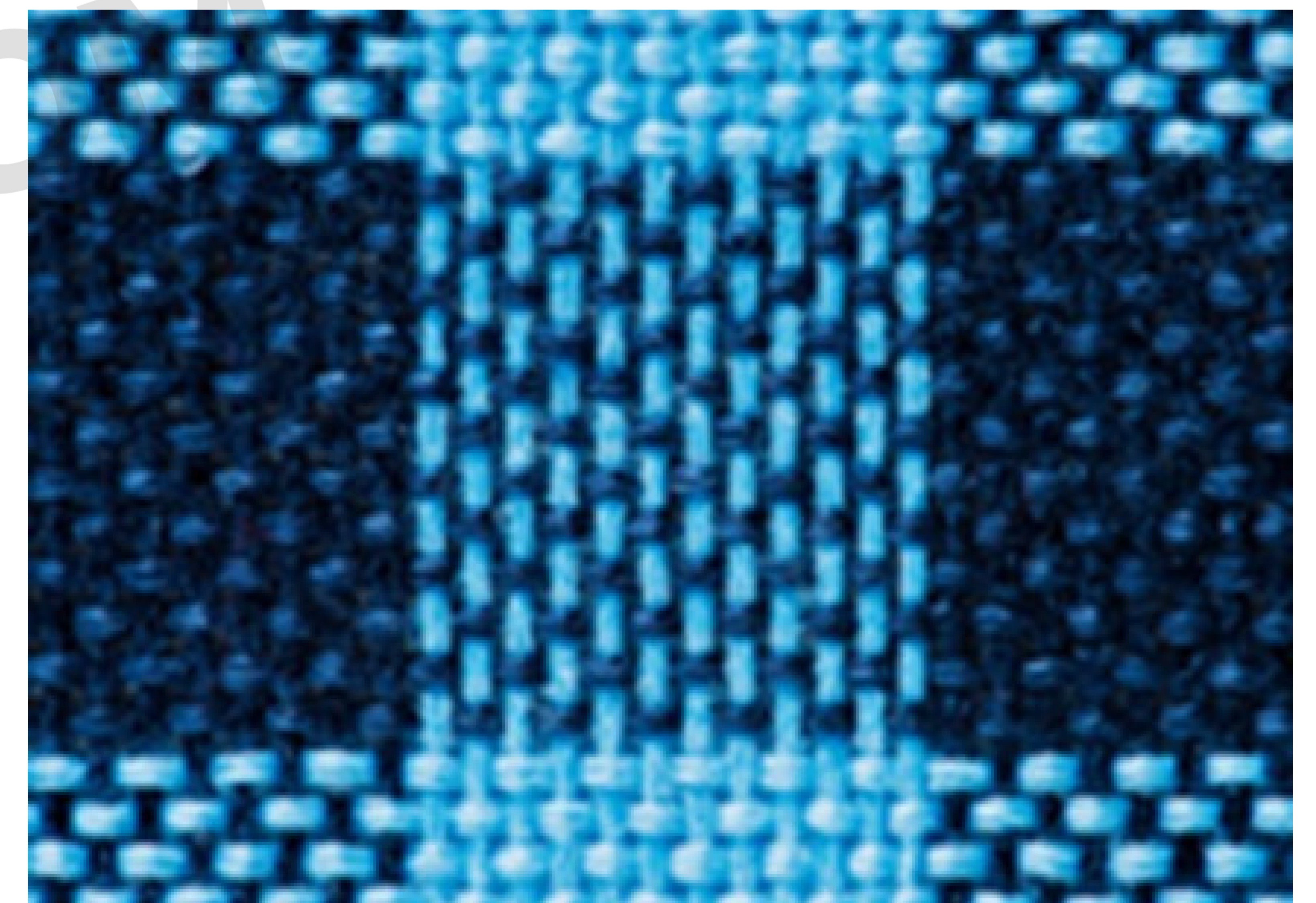
g) Percale :

A closely woven, plain-weave, spun fabric used for dress goods and sheeting, generally 80 x 80 threads per inch or better.



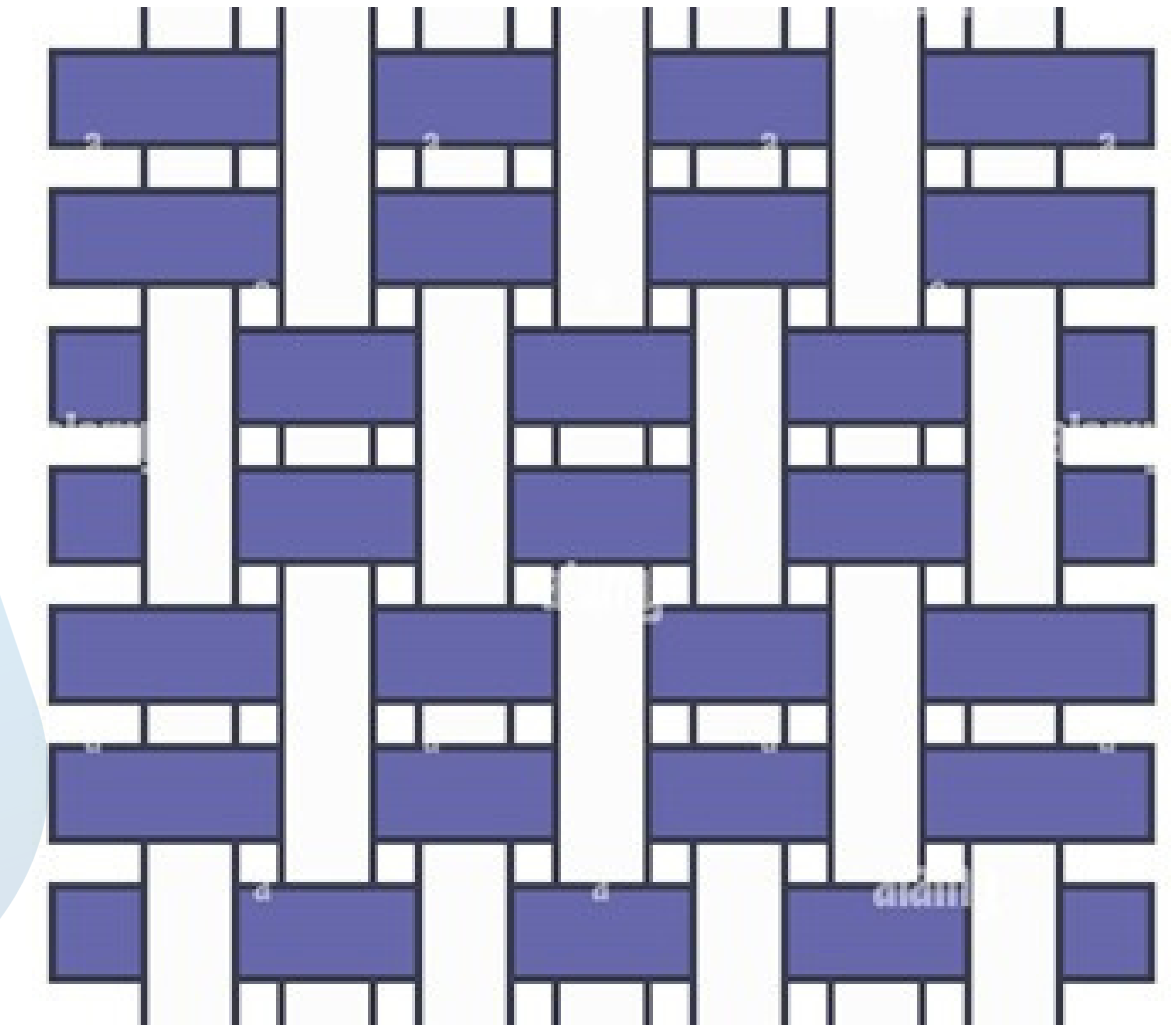
h) Single Pick :

Single Pick is a weaving process that alternates one warp end (single pick) passing successively over and under one weft pick, alternating each row, 1 x 1. This results in a tighter weave and softer touch.



i) Double Pick :

The Double Pick Sheet is rough and harsh, not a feeling you want to leave your guest with. This is a plain weave that alternates one warp (lengthwise) end passing successively over and under two weft (cross) picks, alternating each row, 1 x 2.



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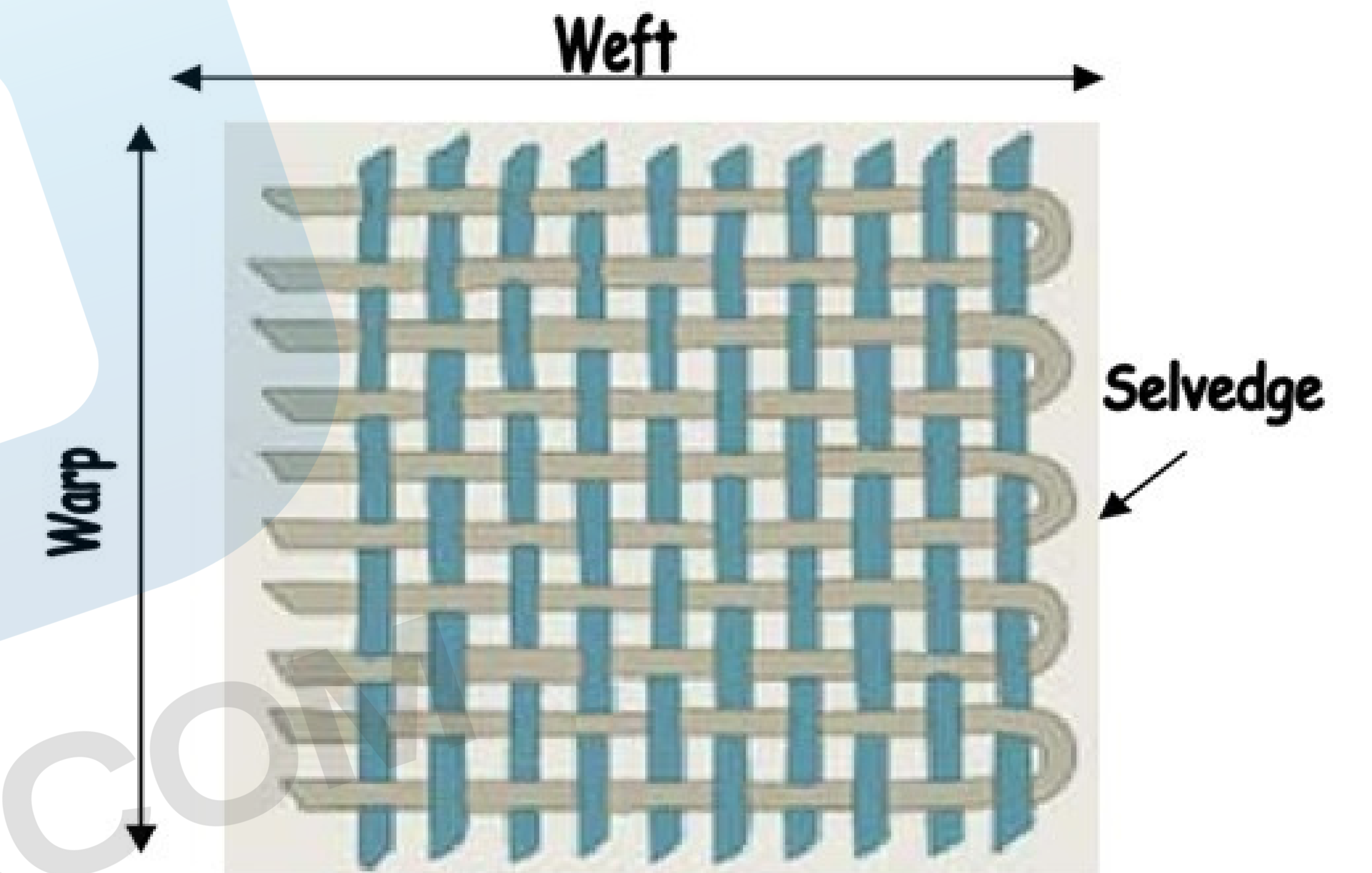
C. Other Terms

a) Warp :

To arrange strands of yarn or thread lengthwise onto (a loom) in preparation for weaving.

b) Weft :

The horizontal threads interlaced through the warp in a woven fabric



c) Pick :

A single filling yarn carried by one trip of the weft-insertion device across the loom. The picks interface with the warp ends to form a woven fabric.



d) Width :

A horizontal measurement of a material. In woven fabric, it is the distance from selvage to selvage, and in knitted fabric, from edge to edge.



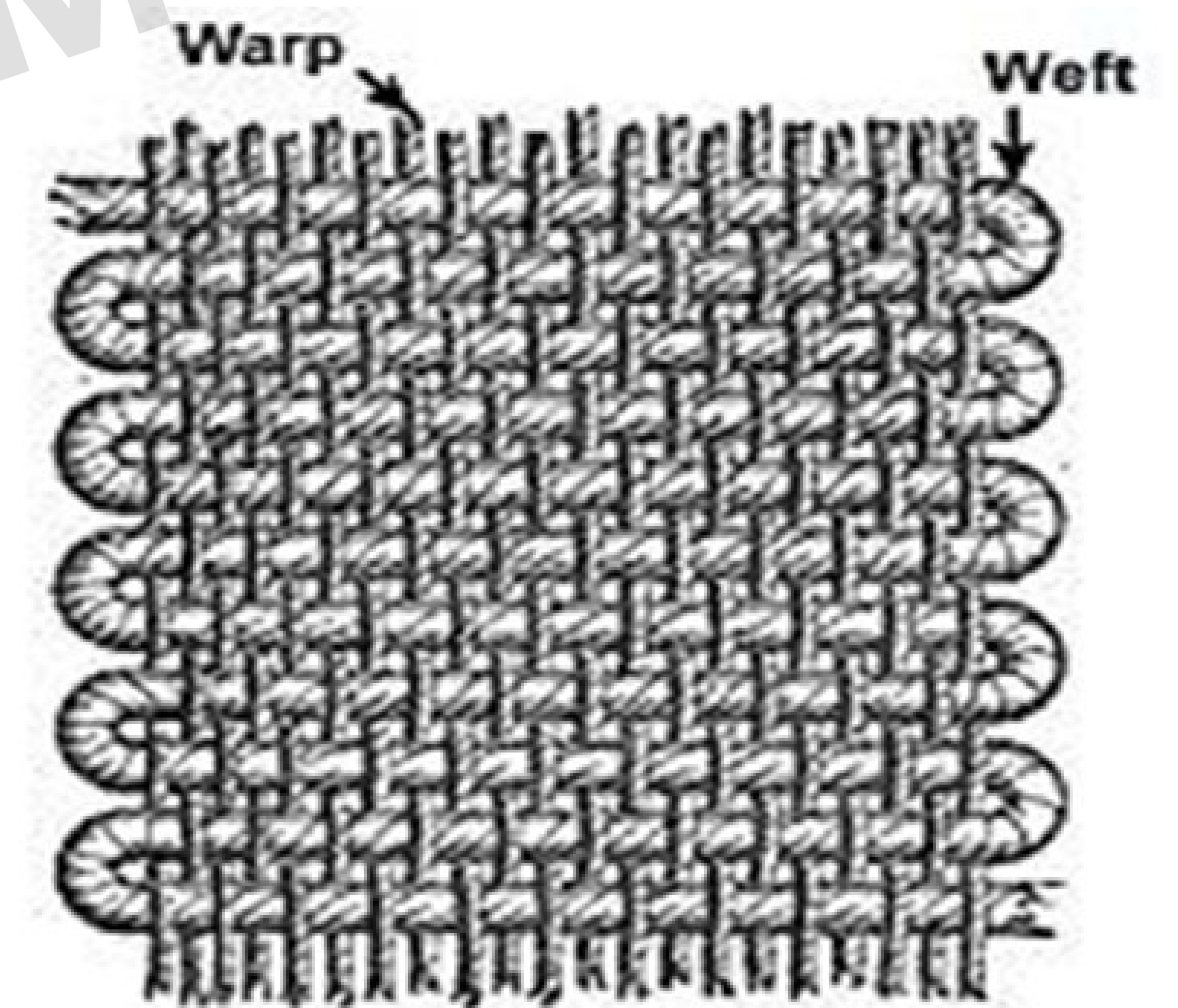
e) Selvedge :

The narrow edge of woven fabric that runs parallel to the warp. It is made with stronger yarns in a tighter construction than the body of the fabric to prevent unraveling. A fast selvage encloses all, or part of the picks, and a selvage is not fast when the filling threads are cut at the fabric edge after each pick.



f) Fabric Construction :

The details of structure of fabric. These include such information as style, width, type of weave, or knit, yarns per inch in warp and fill, and weight of goods.



g) Elongation :

The difference between the length of stretched specimen and initial length, expressed as a percentage of the initial length. It is measured at any specified load or at the breaking point.



3. A. Machines

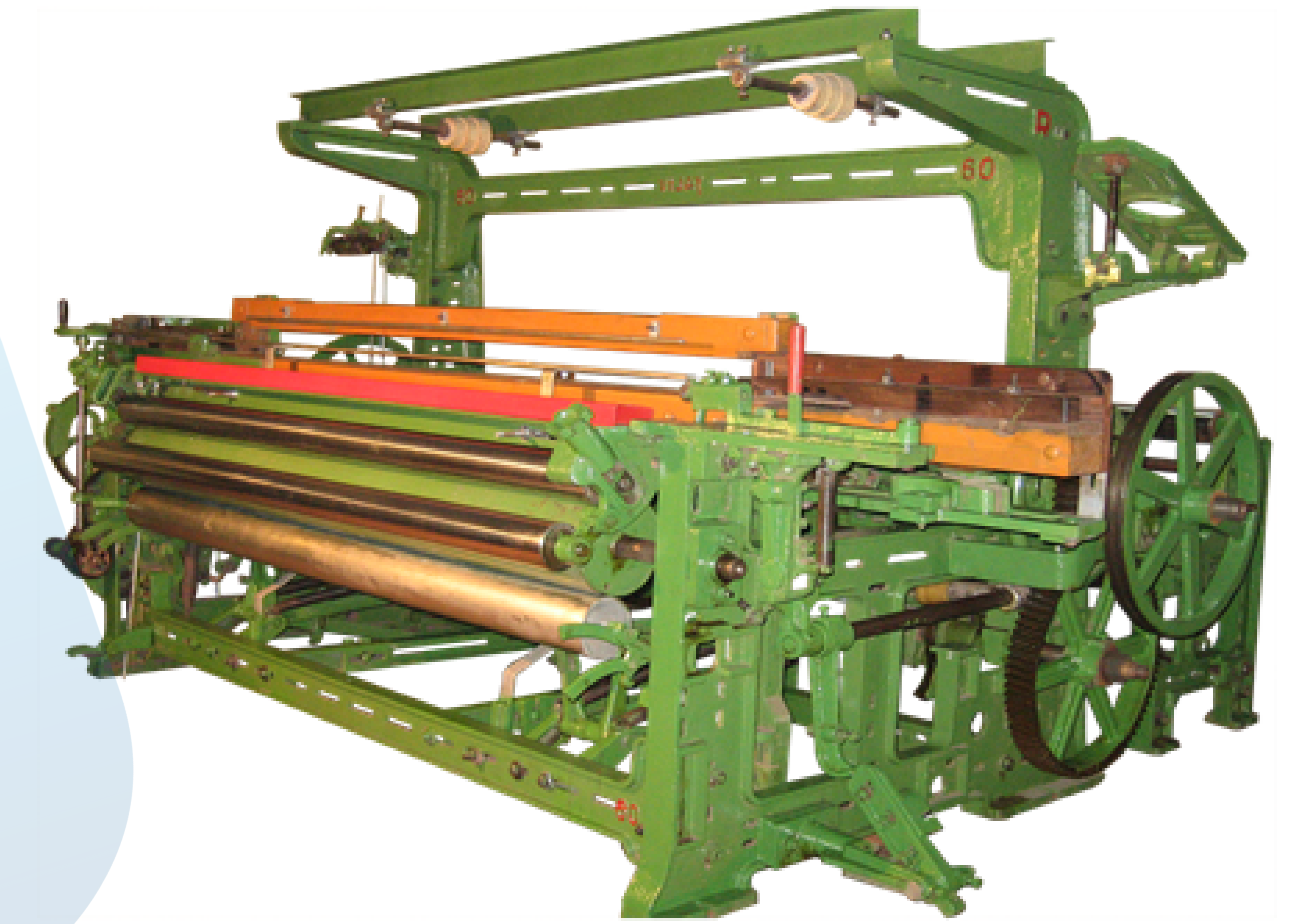
a) Handloom :

A 'handloom' is a loom that is used to weave cloth without the use of any electricity. Hand weaving is done on pit looms or frame looms generally located in weavers' homes. Weaving is primarily the interlacing of two sets of yarn – the warp (length) and the weft (width).



b) Power Loom :

A power-driven loom operated by an electronic motor or a belt driven by central power source. This is a standard form of loom used in commercial production of fabrics.



c) Rapier Loom :

A type of shuttle less loom in which the filling yarn shot through the shed by use of rapier or projectile.



d) Air-jet Loom :

A shuttle less loom that employs a jet of air to carry the filling yarn through the shed.



e) Water-jet Loom :

A shuttle less loom that employs a jet of water to carry the filling yarn through the shed.



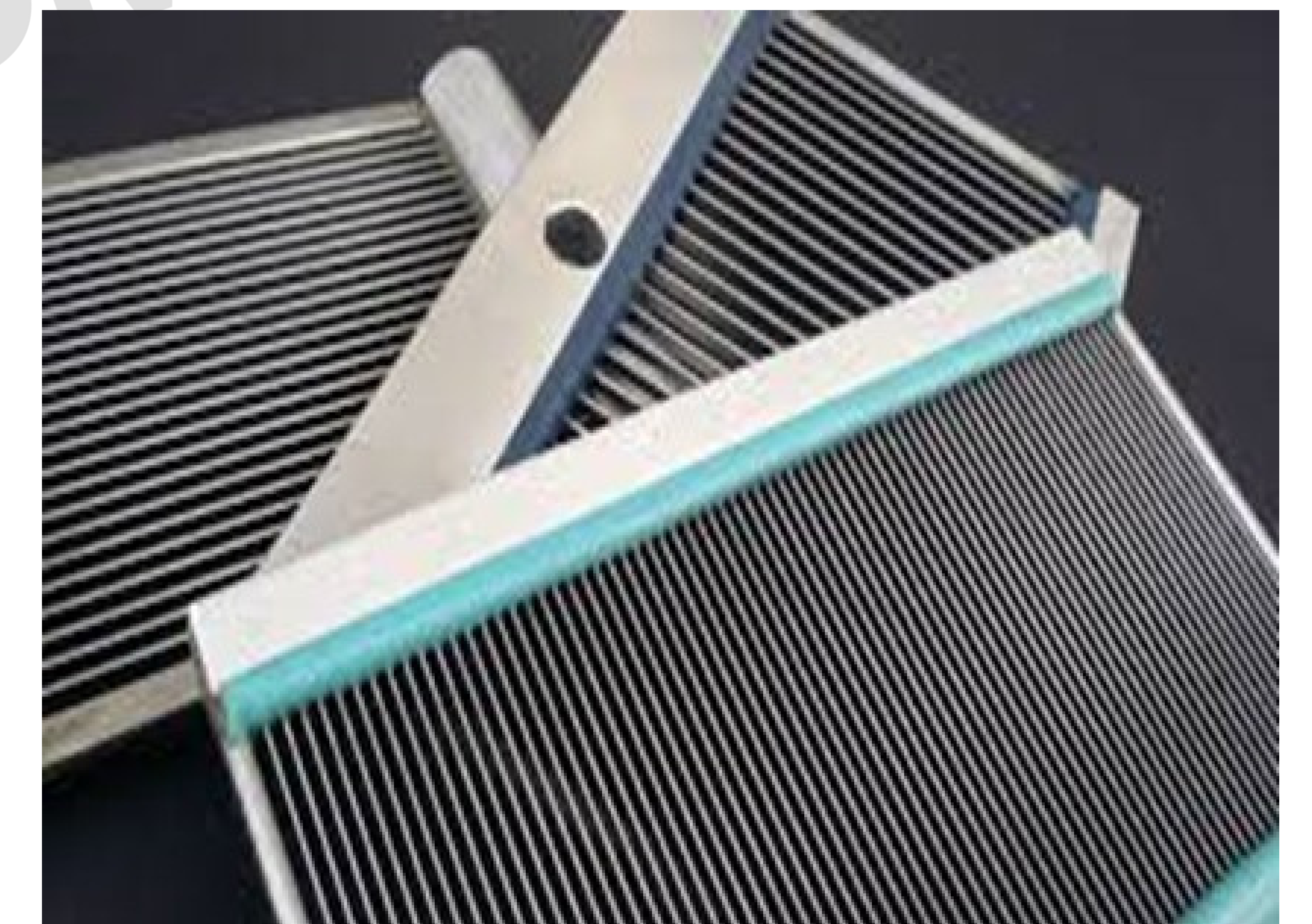
f) Dobby :

A mechanical attachment on a loom that controls the harness to permit the weaving of geometric figures.



g) Reed :

A comb like device on a loom that separates the warp yarns and also beats each succeeding filling yarn against those already woven. The space between two adjacent wires of the reed is called a dent. The fineness of the reed is calculated by the number of dents to the inch. The more dents to the inch, the finer the reed.



h) Jacquard :

A system of weaving that utilizes a highly versatile pattern mechanism to permit the production of large, intricate designs. The weave pattern is achieved by a series of punched cards. Each card perforation controls the action of one warp thread for the passage of one pick. The machine may carry a large number of cards, depending upon the design, because there is a separate card for each pick in the pattern. Jacquard weaving is used for tapestry, brocade, damask, brocatelle, figured necktie and dress fabrics, and some floor coverings. A similar device is used for the production of figured patterns on some knit goods.



i) Pick Glass :

A pick glass also known as a piece glass is a magnifying glass helpful in counting thread count. It is used to determine the number of yarns in warp and weft in woven fabrics and courses and wales in knitted fabrics. Compact constructions of fabrics may have a higher thread count. That is also called "cloth count."



B. Processes

a) Dyeing :

A process of coloring fibers, yarns, or fabrics with either a natural or synthetic dye.



b) Yarn Dyed :

Fabric woven with yarns that have been dyed prior to the weaving of the goods, as opposed to piece dyed fabrics, which are woven with undyed warp and fill yarns.



c) Piece Dyed :

Fabric that is dyed after it is woven, in full piece form. The greige goods for piece dyeing can be cotton, polyester, or blends. Construction can be a dobby, jacquard, epinglé, or velvet.



d) Bleaching :

Any of several processes to remove the natural and artificial impurities in fabrics to obtain clear whites for finished fabric or in preparation for dyeing and finishing.



e) Embossing :

A calendaring process for producing raised or projected figures or designs in relief on fabric surfaces. Embossed surfaces are usually produced on fabrics by engraved, heated rollers that give a raised effect. Embossed velvet or plush is made by shearing the pile to different levels or by pressing part of the pile flat.



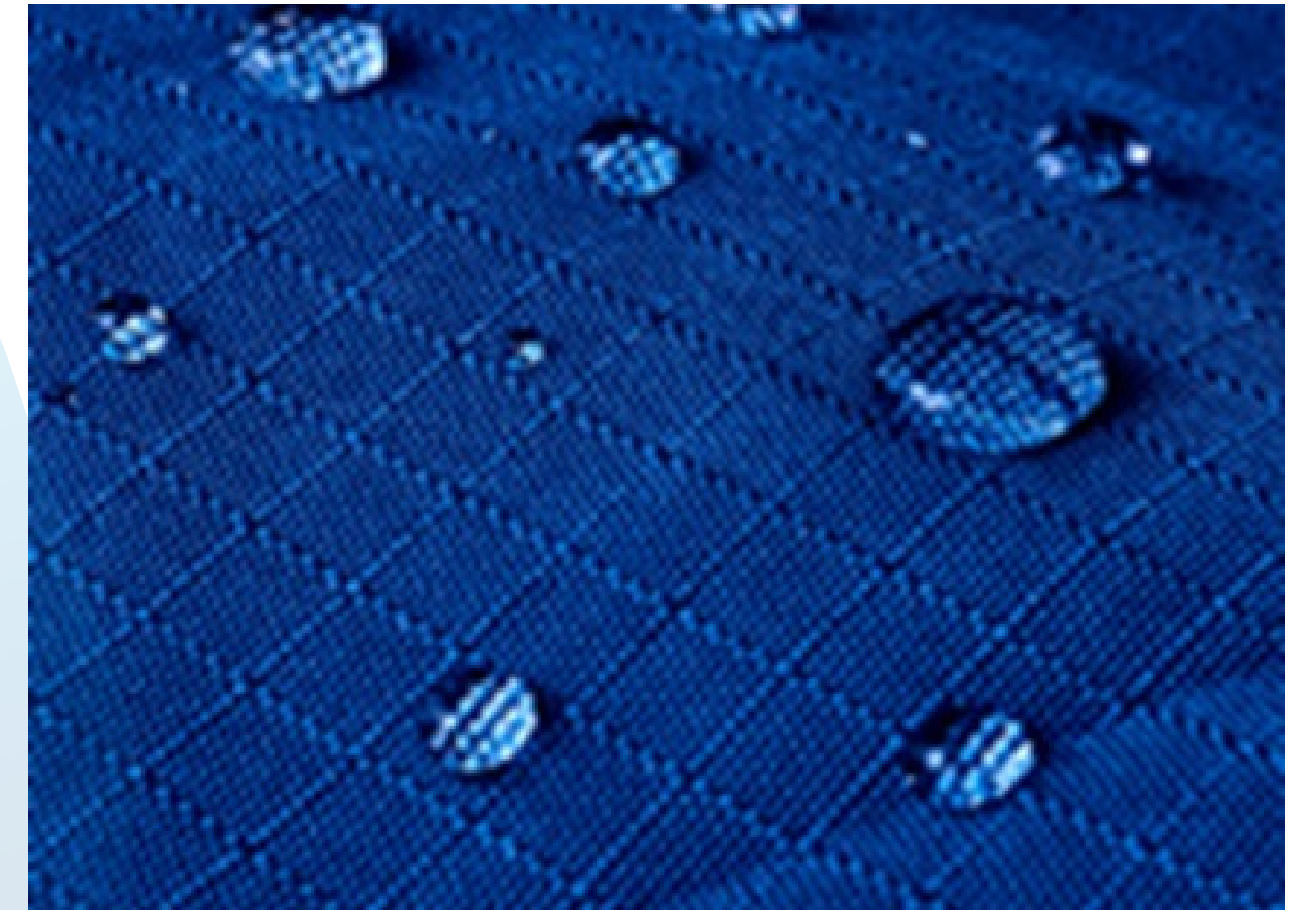
f) Brushing :

A finishing process in which rotating brushes raise a nap on knit or woven fabrics. Brushing is used on sweaters, scarves, knit underwear, wool broadcloths, etc.



g) Water Proof :

A term applied to materials that are impermeable to water; waterproof fabrics have had all their pores closed and are also impermeable to air and very uncomfortable.



h) Water Repellant :

A term applied to fabrics that can shed water but are permeable to air and comfortable to wear. These fabrics are produced by treating the material with a resin, wax, or plastic finish that is not completely permanent.



i) Shrinkage :

Widthwise or lengthwise contraction of a fiber, yarn, or fabric, usually after wetting and redrying or on exposure to elevated temperature.



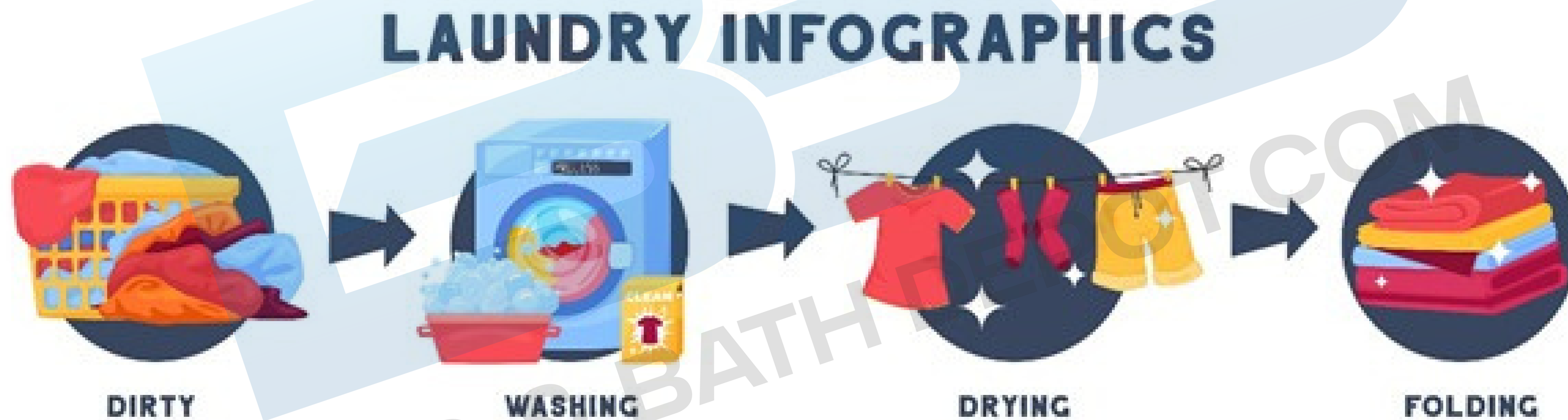
j) Finished Fabric :

Fabric that is ready for the market, having passed through the required finishing process.



k) Wash Cycle :

The wash formula or cycle is a proper balance using the four basic cleaning factors and will vary according to the degree and type of soil. Proper sorting and loading will help ensure that the cleaning factors-time, temperature. Mechanical action and chemical action are used to design a balanced washing formula.



C. Other Terms

a) Count :

A numerical designation of yarn size indicating the relationship of length to weight.

b) Thread Count:

Thread count is a measure of the number of threads woven into one square inch of fabric. Essentially, it's a measure of how tightly woven a fabric is.

c) Fabric Count:

The Fabric count is the number of warp and weft yarns per unit distance while the fabric is held without tension and is free of folds and wrinkles.