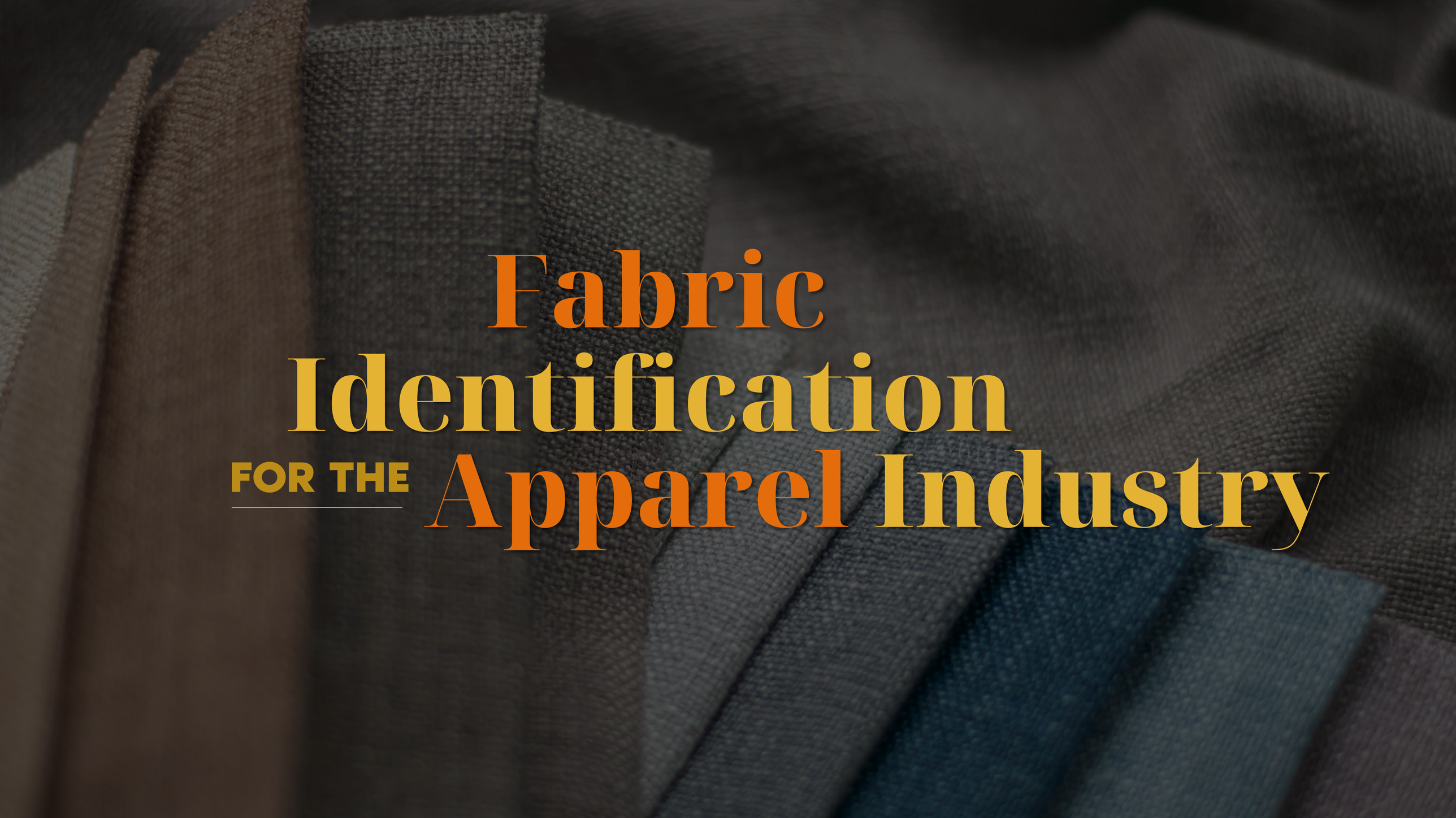
Fabric
Identification
FOR THE Apparel Industry

Types of Textile Yarn

The process of converting fibers into continuous strands of yarn is called spinning. The fibers are opened, cleaned, aligned and twisted to produce a yarn.

Spun Yarns

Yarns made of twisting short fibers are called spun yarns.

Filament

Yarns are made by twisting fibers of indefinite length. They produce smooth and lustrous fabrics.

Plied Yarns

When two or more single yarns are combined by twisting, they are called plied yarns. Plying of yarns increases the yarn qualities like strength, uniformity etc.

Textured Yarns

Yarns made of synthetic fibers are given moisture, heat or chemical treatment to impart new yarn properties especially, bulk and stretch.

Fancy Yarns

These are yarns with interesting surface textures and are generally used for decorative purposes. Typical fancy yarns are tweed, boucle, chenille, and metallic.

Blended Yarns

Yarns made of two or more varieties of fibers are called blended yarns. Different varieties of fibers are combined to optimize various fiber properties.

Yarn Count

Yarn Count is the value of the linear density (the diameter) to which that yarn was spun. It tells us the coarseness or fineness of a yarn.

Calculating the Yarn Count

The yarn count tells you how thick a yarn is, which can tell you a lot about its durability, strength, and comfort.

The yarn count represents either the mass per unit length, or length per unit mass of the spun yarn.

The Direct System

In this system, a higher count represents a heavier, and therefore coarser yarn.

N= (W/l) / (L/w)

Tex: Grams per 1000m (1 km) of yarn , where Tex would be the weight in grams of one kilometer of yarn

Denier: Grams per 9000m (9 km) of yarn

The Indirect System

In the indirect system, a higher count indicates finer yarn.

$$N = (L/w) / (W/l)$$

> English, abbreviated N is the number of hanks (a length of 840 yards) per pound

Types of Textile Fabrics

ANIMAL-BASED | PLANT-BASED

Animal-Based Textile Fabrics

Animal-based textile fabrics tend to be more expensive and reserved for special uses.

Silk, leather, and wool are common textile fabrics made from animals.

Plant-Based Textile Fabrics

Cotton is an all-season fabric that provides breathability and softness. Cotton is preferred for clothing and bedding because it generally does not cause allergies.

Jute is a natural textile fabric used to make rugs, carpets, twine, sacks, and linoleum. Jute is very resistant to wear and tear.

Linen is made from the flax plant. Linen is durable, allergen-free, and can be washed by hand. Because of its durability, linen is used to make tablecloths, curtains, and clothing.

Hemp is a durable textile fabric used to make clothing, shoes, home furnishings, and furniture. It offers UV protection, insulation, and softness that makes it ideal for outerwear.

Silk

is very soft and provides a luster unlike any other natural fabric, which is why it is used to make high-end clothing and bedding. It is considered the most luxurious fabric in the fashion industry.

Leather

can be made from cows, bison, pigs, goats, and other animals depending on the region it came from. Leather can be both soft and firm, making it ideal for footwear, clothing, accessories, and home furnishings.

Wool

is a warm textile fabric. Wool offers moisture-wicking properties in hot and cold weather. It is used to make sweaters, blankets, and rugs because of its resistance to wrinkling and catching fire when exposed to flames.

Man-Made Fibers

Man-made fibers are manufactured either from chemicals or from natural sources. Early manufactured fibers like Viscose, Nylon, and Acetate produced silk like fabrics.

The man-made fibers manufactured from natural cellulose are called as regenerated fibers. Ex. Viscose Rayon, Acetate Rayon, etc.

Some of the most commonly used man-made fibers are Polyester, Nylon, Acrylic, Acetate, Spandex etc. These fibers shrink and melt at higher temperatures. They are found to have high strength and elasticity thus, making durable fabrics. Most of the synthetic fibers possess poor water absorbency.

Influence of major fiber properties on fabric performance and appearance

Strength

fibers like Polyester produce strong fabrics with good resistance to rubbing.

Absorbency

of fibers decides the absorbency, comfort, warmth, static charge buildup of fabrics. Those fibers, which absorb water, are hydrophilic fibers and those which do not absorb water are called hydrophobic fibers.

Elasticity

Fibers with good elasticity produce fabrics with good fit and appearance.

Heat Conductivity

of fibers affects the comfort and warming effect of fabrics. Wool is a poor conductor of heat so possesses insulating characteristics.

Lustrous

Fabric luster depends on the fiber texture and luster.

Resilience

fibers like wool contribute to high wrinkle recovery. Thus, fabric made of wool does not wrinkle.

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