



TRINITY COLLEGE FOR WOMEN NAMAKKAL

DEPARTMENT OF COSTUME DESIGN & FASHION

**TEXTILE SCIENCE
ODD SEMESTER**

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YARN

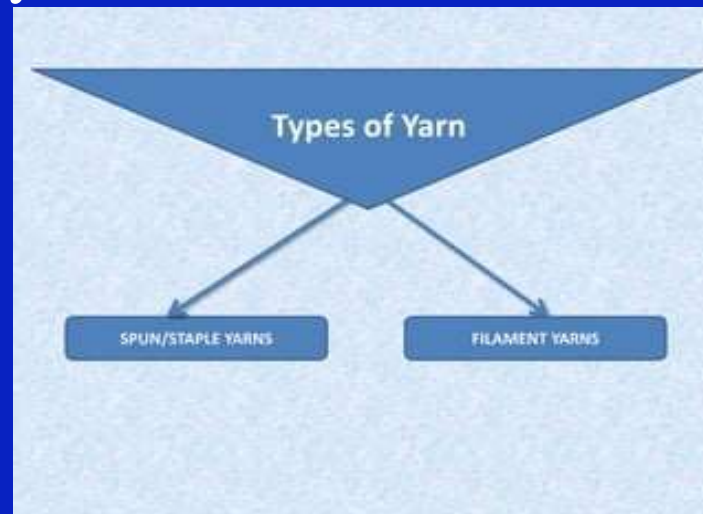
DEFINITION:

“A continuous strand of twisted textile fibres is called yarn”. The yarn is used in weaving and knitting.

CLASSIFICATION OF YARN:

The yarn can be classified into two main categories:

- Spun or staple yarn
- Filament yarn



SPUN YARN:

The yarn made of staple fibres by twisting together is called spun or staple yarn.

It can be classified into various subcategories according to different bases:

According to the number of plies:

on the basis of the number of ply, the yarn can be classified into two categories:

- a) Single-ply yarn
- b) Multi-plys yarn

Single-ply yarn:

The spun or staple yarn having only one ply is called single-ply yarn.

Multi-plys yarn:

The spun or staple yarn consisting of more than one ply twisted together or grouped together only is called multi-plys yarn.

According to the direction of the twist:

on the basis of the direction of twist the spun yarn can be classified into three categories:

S – twist yarn

Z – twist yarn

Zero twist or twist less yarn

1- S – twist yarn:

Spun or staple yarn twisted in a clock-wise direction is called S – twist yarn.

2- Z – twist yarn:

Spun or staple yarn twisted in an anti-clockwise direction is called Z – twist yarn.

3- Zero-twist or twist less yarn:

This yarn is made by wrapping soluble filament with untwisted staple fibres. Hot water soluble filaments are used for wrapping. After weaving, these filaments are dissolved in hot water during processing. Thus fabric having spun yarn looks twistless, therefore it is called zero twist yarn.

According to the degree of the twist:

on the basis of the degree of twist, the spun yarn can be classified in three categories:

1. Low twist yarn
2. Normal twist yarn
3. High twist yarn

1. Low twist yarn:

This type of yarn contains less degree of twist than standard. It has bulkiness and a soft feel. It possesses less strength than normal twist yarn. It shows poor lustre and less clarity in the structure.

2. Normal twist yarn:

This type of yarn has a normal twist as per spinning norms and specifications.

3. High twist yarn:

This type of yarn contains a higher degree of twist than standard. This yarn has a rough feel. This yarn increases the clarity of the texture of the fabric.

According to the spinning process used:

according to the spinning technology used, the spun yarn can be classified into two groups:

1. Ring frame yarn
2. Open-end yarn

1- Ring frame yarn:

The yarn being spun by the ring frame machine is called ring frame yarn.

It can be further divided into the following categories:

- a) Carded yarn
- b) Super carded yarn
- c) Semi-combed yarn
- d) Combed yarn
- e) Super combed yarn
- f) Compact yarn

2- Open-end yarn:

This yarn is manufactured on an open-end machine (rotor spinning machine). The yarn is directly spun from a sliver obtained from carding. Many processes of spinning are bypassed in this method of producing the yarn.

Therefore yarn obtained from this process is cheaper than ring frame yarn. This type of yarn contains short fibres. It has poor strength. It contains more dirt and broken seeds than any ring frame spun yarn having the same mixing of fibres. It shows the poor level of hairiness, lustre, and hand feel.

This type of yarn contains many irregularities.

- Low twist yarn
- High twist yarn
- Normal twist yarn

THANK YOU

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