

NEW TEXTILES

YARN

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<http://www.etsy.com/shop/MyMixMix>

YARN

“A continuous strand of textile fibers, filaments, or materials in a form suitable for knitting, weaving, or otherwise intertwining to form a textile fabric”

-American Society for Testing and Materials (ASTM)



The Spinner, c. 1873
by William-Adolphe Bouguereau

TYPES OF YARN

- Filament Yarns
 - Smooth filament yarns: smooth uniform filaments
 - Bulk yarns: textured filaments
 - Mono filament yarns: single filament
 - Tape yarns: tape-like filaments
- Spun Yarns: spun from staple fiber



STAPLE FIBER → YARN PROCESS

- Opening: cleaning the fiber
- Carding (combing): aligns fiber, produces slivers
 - <http://www.youtube.com/watch?v=XMnN4sxZH9U>
 - <http://www.youtube.com/watch?v=HExdX0GoJxk>
- Drawing (rolling): increases alignment, combines slivers
 - <http://www.youtube.com/watch?v=AA2VrlxoZDE&NR>
 - <http://www.youtube.com/watch?v=EFjJGgF4xz0>
- Combing (brushing): increases alignment
 - Combed yarn="worsted" or "combed"
 - Uncombed yarn="woolen" or "carded"

STAPLE FIBER → YARN PROCESS

- Roving: increases alignment, introduces slight twist
- Spinning (twisting): creates yarn
 - <http://www.youtube.com/watch?v=SHI7ckAFMHI>
 - <http://www.youtube.com/user/yarnmanme#p/u/1/dRY0-3IORJA>
- Plying
 - <http://www.youtube.com/user/yarnmanme#p/u/3/erFrvpBnIDk>

MEASURING YARNS

- Fiber length
- Twist
 - Direction
 - S twist
 - Z twist
 - Amount
 - turns/twists per inch
- Ply: number of strands in yarn
- Size
 - Yarn number (ie: 8/2 cotton yarn)
 - Top number: how many 840 yard hanks are required of a single strand of a cotton fiber to equal a pound (finer yarn=higher number)
 - Bottom number: number of ply
 - Denier (for filament yarn)
 - weight in grams of 9000 meters of yarn (larger yarn = higher number)
 - $1000/280 = \text{yarn denier/fiber denier}$
 - Tex
 - Weight in grams of 1000 meters of yarn

