

# Silk

## Facts About Silk

Silk is universally accepted as a luxury fiber. The slogan "only silk" emphasizes its uniqueness. Silk is a continuous filament fiber produced by the silk worm. The look of the silk fibers can vary depending upon the production controls used. The different types of silk are:

- Cultivated Silk is the smooth fine fiber produced from silk worms that feed on mulberry leaves.
- Wild or Tussah Silk is a tan colored fiber from the uncultivated silk worm which feeds on scrub oak. Shantung, pongee and honan are fabrics made from wild silk.
- Dupioni Silk comes from two silk worms that spin their cocoons together. The yarn is uneven, irregular and large in diameter.
- Spun Silk refers to yarn made from staple fiber from pierced cocoons and waste silk.

Silk is used for a wide range of women's garments, including gowns, dresses, separates, scarves and lingerie in both woven and knitted fabrics. Men's garments include suits, jackets, sports shirts and ties. Silk is also commonly used in draperies, bedspreads, comforters and furniture covers.

**Manufacturing Processes** Silk fabric may be imparted with one or more of the following characteristics during manufacture to alter the look and feel of the fabric.

- Sizing: The type of sizing used gives the silk a soft feel, more luster, hand and drape.
- Sueded Silk: The surface of the silk has been abraded to create a soft texture.
- Washable Silk: A silk garment that has been prewashed to provide consumers with a more casual look.
- Sand Washed Silk: Silk that has been subjected to a washing using sand and chemicals giving the silk a soft, used and distressed look.
- Wrinkled Look: The fabric has been subjected to heat, moisture and mechanical action that imparts hard breaks and wrinkles in the fabric.
- Bonded Silk: Silk that has been fused to a resin treated fabric using heat and pressure.

**Fabric Problems** Typical problems associated with silk are:

- The sizing used, which adds weight and luster to the fabric. Sizing rings result from water soluble sizing that has been in contact with water or moisture. It appears as rings or lightened areas.
- The dyes used on silk to give it extra luster, brightness and eye appeal. Dullness of color may result in some silk from drycleaning or spotting. It appears as dull, gray or lifeless in color when dye has been dissolved. Crocking or chafing may result from mechanical action in normal wear, drycleaning or spotting. Dye bleeding may occur, especially in printed silks, where the dyes are fugitive. It may occur in areas such as underarms because of perspiration or it could occur in spotting.
- Yarn shifting and yarn slippage result from a loose fabric weave and fine yarns frequently found in silk fabrics.
- Yarn degradation results from contact with chloride salts in perspiration and in some beverages and food. Yarn degradation is followed by a weakening and snapping of the yarns. Silk draperies and other household items may show the greatest degree of degradation from exposure to light. The resins used in bonded silk can breakdown causing rings, discoloration and puckering.

**Inspection** Examine silk garments for dye loss, discoloration, fading, dye bleeding and chafing. Check for fading from sunlight and atmospheric gas by comparing exposed areas with unexposed areas. Even new garments may show some fading. Discolorations may be found in underarm areas, waistline and other areas where perspiration normally occurs. Yarn or seam slippage may be found in areas subject to strain such as in the hips, back, sleeve or elbow. Be sure to note all problems on the sales slip when receiving the garment.

**Drycleaning** Before drycleaning, silks labeled as washable should be tested as follows: Rub an unexposed area of the garment with a cheesecloth dampened with a volatile dry solvent. Note the degree of dye removal and classify poorly dyed silks for wetcleaning. Silks should always be classified as fragile. Dryclean for no more than five minutes in a high solvent level with no moisture. Keep the solvent temperature below 80°F, since hot solvent will bleed the dye used on silk more readily than cool solvent. Loosely woven silk should be placed in a net bag.

**Spotting** Spotting on bonded silks must be curtailed since water and dryside agents can break down the resins causing rings and discoloration that may not be corrected. It may be necessary to open up the lining to check for the bonded fabric. The dye fastness of silk may be unpredictable. To test dye fastness to wetside spotting, always flush into a cheesecloth. Observe the cheesecloth for dye bleeding which is a consideration if further spotting procedure can be used. For wetside staining, use a neutral lubricant or glycerin. This is not the same as prepared tannin or protein formulas which are prepared with acid or alkaline chemicals. When tamping or brushing silk, it is advisable to use a special padded brush (no bristles) or wrap a cheesecloth around a bristle brush so a padded surface is obtained. Do not use spatulas as permanent abrasion and fabric damage can occur. Make sure fabric is perfectly smooth while applying mechanical action since yarn damage and shifting can occur.

When further spotting is needed for tannin stains, it will be necessary to test the chemicals, especially on bright, vivid and deep colors. Test tannin formula, acetic acid, general formula and rust remover. When heat has to be applied, carefully test red, pink and purple silk for blue or black permanent discolorations that can occur. When removing protein stains it must be noted that alkali and protein formulas have the greatest potential to discolor dyes on silk. An alternate approach to alkali would be to use digesters (enzymes.) Use leveling agents to prevent rings and clean when moisture in fabric has evaporated (10-15 minutes.) Dryside spotting agents are generally safe to silk provided no water is used. Once water is used, the oily type paint remover activates the alcohol in OTPR causing dye damage. This can occur from:

- Using a steam gun with oily type paint remover,
- Using a wet brush when spotting with oily type paint remover,
- Letting oily type paint remover remain in fabric for a long period of time.

**Wetcleaning** Silks should be tested for wet cleaning, even those labeled as washable. Apply a neutral lubricant to unexposed area and flush into cheesecloth and dry with air gun. Note: Dye transfer and appearance of tested area. Shrinkage can be a problem on silk with twisted yarns or crepe like silk. Consider limitation of lining and trimming. A signed customer release should be obtained when in doubt.

When wetcleaning, soak in warm water (no more than 100°F (body temperature.) Add neutral lubricant and a small amount of acetic acid as a dye setter. Rinse and extract lightly. Use a steam air finisher to blow out wrinkles while the fabric is damp. Hang to dry if the fabric has a wrinkled look. If the fabric feels harsh after wet cleaning and is drycleanable, a short run in the drycleaning machine may help.

**Finishing** Silk can usually withstand heat and pressure during finishing. Limit the use of heat and pressure when handling the wrinkled look or when pressing over seams and pockets. When using the water gun, aim the gun up and let a fine mist settle on the fabric. This will help prevent water rings.

**Correction Procedures** Dye loss or chafing in small areas can sometimes be corrected with dye pads or oil pads. As a last resort, discoloration from spotting can sometimes be corrected by soaking garment in warm water with a neutral lubricant. Rinse, extract and hang to dry. Attempt the use of titanium sulphite for correction of dye bleeding.

## Summary

The look of silk can be varied depending on the manufacturing processes used. Silk fabric is fragile, resulting in yarn

slippage and yarn shifting. Dye loss is a serious problem in silks, especially where brilliant or deep colors are used. Test before drycleaning washable silk, wetcleaning or attempting wetside spotting procedures. Silk fibers will degrade from perspiration or beverage stains.

In Closing here is a pretty cool video all about spinning silk handkerchiefs:

{youtube}tZtZ90iqja8{/youtube}