

How Silk is Made

Silk comes from the cocoon of the silk worm. Although many insects produce silk, the commercial silk industry primarily uses the filament produced by the *Bombyx Mori* or Mulberry Silk Moth. The silk worm feeds on mulberry leaves and then attaches itself to a mulberry tree to spin a silk cocoon. This process takes from three to eight days and is referred to as pupating. Farmers raise the cocoons and sell them to manufacturers.



Silk manufacturers sort cocoons according to color, size, shape and texture as these attributes affect the quality of the silk. Cocoons range from white and yellow to grayish. After the cocoons have been sorted, they need to be softened through a series of hot and cold immersions.

Often intact cocoons are boiled in water for five minutes and turned gently. Then they are removed from the water and dried.



The next step of the process is reeling which refers to the unwinding of the silk filaments from the cocoon and combining them together to make a thread of raw silk. After drying, the cocoons



are dissected with a needle to pick the strands. When a strand comes off it has to be wound (around a pencil, for example) in one continuous thread. This stage requires a great deal of delicate handling. The filament of the cocoon is very fine, therefore it is necessary to combine three to ten strands to produce the desired diameter of raw silk which is known as "reeled silk." The usable length of the reeled filament is 300 to 600 m. The amount of usable silk is small. Approximately 2500 silk worms are required to produce a pound of raw silk.



The final step is weaving. Silk weaving creates a fabric by interlacing the yarns. Weaving can be carried out on either a hand or power loom. Both hand and power looms are used in India today.