

## **A Study on Abrasion Characteristics and Pilling Performance of Socks**

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**Abstract:**

This research concerns the effects of fiber type, yarn count (for single and ply yarn), to the abrasion resistance and pilling performance of socks. Seven different types of socks were selected from Egyptian market. Specimens were subjected to Martindale apparatus and Roll Box to measure abrasion resistance and pilling performance, according to the "ASTM". It was found that the abrasion resistance value of socks can be increased by a number of measures; use of thicker yarns, adding PA to the structure, adding elastic yarns to the structure. It was also found that the use of coarse yarns, addition of polyester, polyamide fibers or elastane filaments to the structure and application increase the abrasion resistance of the socks.

**Keywords:**

Abrasion; Pilling, Socks industry; Wear resistance; Testing Instruments.