

The Effect of Single and Double Yarns in Cotton Fabrics on the Removal of Stain

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Abstract:

Woven fabrics are one of the most important uses of man in his daily life, from which clothes and furnishings of all kinds are made, and all fabrics are exposed to environmental factors that make them vulnerable to dirt and pollutants in that environment. For yarns and fabrics. Where the research aims to obtain those fabrics and the effect of the variables used in the research on removing dirt. Assuming that the types of threads are "single - applied", the length of the fabric composition and the interstitial spaces within the fabrics affect the removal of dirt. The research followed the experimental method, which was produced. The single yarns and their applied counterparts, and each single thread and its counterpart had one single number and one bram number, different from the other two strings. The fabrics were produced from those yarns using a plain weaving composition 1 | 1 and a 3 | 1 of weft. The dirt removal test was performed where the fabric samples were dirty using specific proportions of ground vegetable carbon, mineral oils and grease dissolved in carbon tetrachloride, then a detergent solution was used with heating for two hours and contained the samples, and each sample was placed in a soap solution inside cups that are closed to be placed in a special washing machine. It is rotated inside the washing machine for half an hour, and after the samples came out from the washing machine, they were rinsed with regular water and left to dry, and the gray scale was used to determine the degree of dirtiness of the samples, and one of the most important results was that the fabrics produced with the single thread were better in removing dirt than those produced with the applied thread, as most of them recorded the highest values. To the degree of removing dirt, and the length of the fabric chip has a clear effect, so the longer it is, the more difficult it is to remove dirt from it. Also, the interface distances, the smaller its area, the greater the degree of dirt removal.

Keywords:

Stain removal, Single yarn, Double yarn
