

## Improving the Functional Performance Properties of Non Terry Prayer Rugs by Using Microfiber

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### Abstract:

The use of microfibrils in the production of prayer Rugs is a recent development in the carpet industry, as it adds functional and aesthetic properties to the prayer Rug, Microfibrils are very soft compared to their Other Textile Fibers, such as wool or nylon makes these fiber prayer Rugs comfortable in Usage. It is also characterized by its strength, durability, longevity even with frequent use, lightweight, ease of carrying and cleaning, and its ability to resist bacteria and allergies, as it is naturally resistant to bacteria and fungi, which reduces the possibility of accumulating unpleasant odors or cause allergies, and therefore a healthy carpet for repeated use, all of these characteristics make it a practical choice. And because of that, the research turned to producing Prayer Rugs Using Mozdawg and Weft Backed methods, where microfibers used in face and back wefts, and Polyester number 450 and 600 were used in the filling wefts. The research was based on producing 8 samples using 3 variables: First, the use of two methods (Mozdawg and Weft Backed), Second, the use of two numbers of bristles in the cross section of the Microfibrils Wefts, which are (300/288 and 300/576), Third, the use of two numbers of the filling Wefts(450 and 600) and the use of a fixed weaving structure in all samples, which is satan 8. These samples were laboratory tested and statistically analyzed.

**Research problem :** Due to people being outside the home for long periods of time while working and their need to perform prayer duties, with the spread of many viruses, the trend has begun to use portable prayer rugs that are specific to each prayer duty, which calls for a study on improving the performance properties of non-Terry prayer rugs, which calls us to the following question: 1-To what extent is it possible to improve the performance properties of folded prayer rugs by using microfiber and different implementation methods.

**Research aims:** 1-Improving the comfort properties of non-pile prayer Rugs using different implementation methods. 2- Producing non-Terry Prayer Rugs using microfiber to reduce the microbial activity.

**Research importance:** 1- Improving the marketing of specialty textiles(prayer Rugs). 2-Expanding the use of modern fibers (microfiber). 3- Raise the logo of a product made in Egypt.

**Hypothesis:** 1- Using operational methods that are statistically significant in achieving the research goal. 2. The number of filling wefts are statistically significant in achieving research goal. 3- The use of microfibrils in the production of non-terry prayer Rugs helps reduce microbial activity in the carpets.

**Research Methodology:** This research follows the experimental and analytical method.

### Paper History:

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### Keywords:

Microfiber, Portable Prayer Rug, Double Weft Style, Weft Quilted Style.

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