The effect of material type, yarn count, and treatment with water-repellent materials on some of the natural and mechanical properties of car cover fabrics

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❖ Abstract:

Car covers are considered basic for the preservation of cars of various weather factors such as rain, dust, sun and others. So, we use the next row materials for warp (cotton 100%) and yarn count 16/1 and different types of weft materials (cotton 100% , blended cotton / polyester 50:50% , polyester 100%) and yarn count (12/1, 16/1, 20/1) and the use of the weave structure 3/1 . laboratory tests were done for the samples produced (water permeability, tensile strength and elongation). The research problem is summarized by the fact that some of the currently existing car cover fabrics run out of rain water, which leads to damage to the car's body and the coatings on it , and the need to produce high-strength car covers that bear the changing weather factors. The research objectives are also summarized in the production of car cover fabrics that provide protection from In terms of its resistance to water penetration , and studying the effect of different structural factors on the water permeability properties of car cover fabrics , and access to the best samples of car covers , the research has reached:

• Samples produced from warp cotton and weft polyester are the best samples in terms of tensile strength and elongation, followed by warp cotton and weft cotton/polyester blended 50:50% , then warp cotton and weft cotton samples.

• For water permeability, the cloth equipped with warp cotton and weft polyester is the best water-resistant samples, followed by warp cotton and weft cotton /polyester blends 50:50% , followed by warp cotton and weft cotton samples.

• The raw cloth has very low water permeability resistance.

• The best wefts in terms of tensile strength, elongation and water permeability are 12/1, followed by 16/1, followed by 20/1.

Keywords:

row materials , yarn count , finish , car cover

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