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[\[PDF \(462K\)\]](#) [\[References\]](#)**Effect of tulle on the mechanical properties of a maxillofacial silicone elastomer**[Yumushan GUNAY](#)¹⁾, [Cem KURTOGLU](#)²⁾, [Arzu ATAY](#)¹⁾, [Banu KARAYAZGAN](#)³⁾ and [Cihan Cem GURBUZ](#)²⁾

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Abstract:

The purpose of this research was to investigate if physical properties could be improved by incorporating a tulle reinforcement material into a maxillofacial silicone elastomer. A-2186 silicone elastomer was used in this study. The study group consisted of 20 elastomer specimens incorporated with tulle and fabricated in dumbbell-shaped silicone patterns using ASTM D412 and D624 standards. The control group consisted of 20 elastomer specimens fabricated without tulle. Tensile strength, ultimate elongation, and tear strength of all specimens were measured and analyzed. Statistical analyses were performed using Mann–Whitney U test with a statistical significance at 95% confidence level. It was found that the tensile and tear strengths of tulle-incorporated maxillofacial silicone elastomer were higher than those without tulle incorporation ($p < 0.05$). Therefore, findings of this study suggested that tulle successfully reinforced a maxillofacial silicone elastomer by providing it with better mechanical properties and augmented strength — especially for the delicate edges of maxillofacial prostheses.

Key words:[Color stability](#), [Aging](#), [Spectrophotometer](#)[\[PDF \(462K\)\]](#) [\[References\]](#)

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