

Title (en)
ANTIMICROBIAL RUBBER COMPOSITIONS

Title (de)
ANTIMIKROBIELLE KAUTSCHUKZUSAMMENSETZUNG

Title (fr)
COMPOSITIONS DE CAOUTCHOUC ANTIMICROBIEN

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Abstract (en)
[origin: WO02077095A2] Certain non-silicone pre-vulcanized and/or vulcanized raw rubber formulations that include silver-based compounds to provide highly desirable long-term antimicrobial characteristics (or within the ultimate cured rubber articles made therefrom such pre-vulcanized formulations) are provided. Such formulations are intended to be vulcanized to provide solid or blown (foam or sponge) rubber articles which can be utilized in a variety of different applications (as well as multi-layered composites) including such antimicrobial rubber. As silver-based compounds are deleteriously affected by utilization of standard curing agents and curing accelerators, such as sulfur-based compounds and/or systems, the ability to provide such an effective antimicrobial vulcanized rubber article is rather difficult. However, this invention encompasses the presence of different non-sulfur-based curing systems and curing agents, such as inorganic and organic peroxides and oxides, as some examples, that permit vulcanization and do not irreversibly bind silver ions thereto, thereby resulting in long-term antimicrobial performance of the ultimate rubber article itself. The raw or cured rubber formulations may also comprise fillers and may also include plasticizers to provide desired characteristics of dimensional stability, stiffness, flexural modulus, tensile strength, abrasion resistance, elongation, and the like, for the ultimate rubber article, while simultaneously and surprisingly enhancing the control of antimicrobial efficacy in the rubber article as well.

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