

Title (en)

RUBBER MATERIAL THAT IS LOW IN N-NITROSAMINE

Title (de)

N-NITROSAMINARMER GUMMIWERKSTOFF

Title (fr)

MATERIAU A BASE DE CAOUTCHOUC PAUVRE EN N-NITROSAMINES

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Application

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Abstract (en)

[origin: WO03002647A1] The invention relates to a rubber material (2) that is low in N-nitrosamine and that is used for rubber articles (1) that are subject to high dynamic-mechanical and thermal stresses. The inventive rubber material comprises a vulcanized rubber mixture, especially on the basis of an ethylene-propylene-diene terpolymer, and admixed thereto conventional mixture ingredients. The inventive rubber material is especially characterized in that a molecular sieve including or not water of crystallization is admixed to the rubber mixture and is charged with a free-radical scavenger (Z), while forming a molecular sieve/free-radical scavenger addition compound (3), the free-radical scavenger binding nitrogen oxides (X1) and/or secondary amines (X2) and/or N-nitrosamines (X3). According to an especially advantageous embodiment of the invention, the rubber material (2) is characterized in that the molecular sieve/free-radical scavenger addition compound (3) additionally contains water of crystallization. The molecular sieve is partially dehydrated with respect to a sufficient basic mole quantity (m) and the molecular sieve comprising the reduced mole quantity (m') of water of crystallization is charged with the free-radical scavenger (Z) so that when water is adsorbed, the free-radical scavenger is desorbed as the content of water of crystallization of the molecular sieve increases, and the free-radical scavenger binds nitrogen oxides (X1), and/or secondary amines (X2) and/or N-nitrosamines (X3).

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