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**COMPANIES CALLED : COMPAGNIE GENERALE DES
ETABLISSEMENTS MICHELIN
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**TITLE : Diene elastomer modified, synthesis method for same and
rubber composition comprising it**

ABSTRACT

The present invention relates to a modified diene elastomer composed:

- a) of at least 55% by weight, with respect to the total weight of the modified diene elastomer, of entity coupled by a functional group bearing a function of formula – SiOR, in which R is a hydrogen atom or an alkyl radical, and optionally bearing another function capable of interacting with a reinforcing filler,
- b) of from 5% by weight to 30% by weight, with respect to the total weight of the modified diene elastomer, of star-branched entity having three elastomeric branches connected to one and the same silicon atom belonging to a functional group bearing or not bearing a function capable of interacting with a reinforcing filler,
- c) of a content of less than or equal to 15% by weight, with respect to the total weight of the modified diene elastomer, of entity functionalized at the chain end by a functional group bearing a function –Si(OR)₂, in which R is a hydrogen atom or an alkyl radical, and optionally bearing another function capable of interacting with a reinforcing filler, and
- d) of a content of less than or equal to 15% by weight, with respect to the total weight of the modified diene elastomer, of non-functional diene elastomer.

This elastomer makes it possible to optimize the compromise between cold flow of the elastomer and hysteresis of the rubber composition in which it is present, which is entirely satisfactory for use in the manufacture of tyres.