



ISTITUTO ITALIANO  
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#### TITLE

A Method to Produce Hydrophobic Starch based Bio-elastomer Composites under Ambient Conditions

#### INVENTORS

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#### DESCRIPTION

The invention relates to a process for the production of a hydrophobic composite bioelastomer comprising a cross-linked bioelastomer matrix in which an organic phase is dispersed, comprising moisture catalysed cross-linking of a hydroxy-terminated polysiloxane with a silane coupling agent comprising an acetoxysilane, thereby to produce a cross-linked polysiloxane with acetic acid release, characterised in that the moisture catalysed cross-linking reaction is carried out in the presence of starch, thereby to cause at least partial in situ acetylation, by the released acetic acid, of said starch which is embedded in the cross-linked bioelastomer matrix.

#### APPLICATIONS

Food packaging, moist and gas barrier, household plastic appliances, car industry, shoe industry, construction industry, electronic applications

#### KEYWORDS

Starch thermoplastics, acetylation of starch, starch-based bioplastics, hydrophobicity

#### BIBLIOGRAPHIC DATA

Procedimento per la produzione di un bioelastomero composito, idrofobico, comprendente amido

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