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(54) Title: SHOCK VINYLAROMATIC POLYMER BY POLYMERISATION OF A VINYLAROMATIC MONOMER IN THE PRESENCE OF A STABLE FREE RADICAL AND A POLYMERISATION INITIATOR

(54) Titre: POLYMERE VINYLAROMATIQUE CHOC PAR POLYMERISATION D'UN MONOMERE VINYLAROMATIQUE EN PRESENCE D'UN RADICAL LIBRE STABLE ET D'UN AMORCEUR DE POLYMERISATION

## (57) Abstract

The invention concerns a method for preparing a composition comprising a vinylaromatic polymer enclosing rubber nodules. The invention is characterised in that it includes a step for polymerising at least one vinylaromatic monomer in the presence of rubber, a polymerisation initiator and a stable free radical, said step being such that  $[F_{SFR} \times (SFR)] : [F_{AMO} \times (AMO)]$  ranges from 0.05 to 1,  $F_{SFR}$  and  $F_{AMO}$  representing the functionality of the stable free radical and the initiator respectively and  $(SFR)$  and  $(AMO)$  representing the molar quantities of the stable free radical and the initiator respectively. The final composition is particularly resistant to shocks and/or shiny.

## (57) Abrégé

L'invention concerne un procédé de préparation d'une composition comprenant une matrice de polymère vinyloaromatique entourant des nodules de caoutchouc. Le procédé selon l'invention fait intervenir une étape de polymérisation d'au moins un monomère vinyloaromatique en présence de caoutchouc, d'un amorceur de polymérisation et d'un radical libre stable, ladite étape étant telle que  $[F_{SFR} \times (SFR)] : [F_{AMO} \times (AMO)]$  va de 0,05 à 1,  $F_{SFR}$  et  $F_{AMO}$  représentant respectivement la fonctionnalité du radical libre stable et de l'amorceur et  $(SFR)$  et  $(AMO)$  représentant les quantités molaires respectivement de radical libre stable et d'amorceur. La composition finale est particulièrement résistante aux chocs et/ou brillante.

HISTOGRAMS IN NUMBER AND 2D SURFACE EXAMPLE 1  
Histogrammes en Nombre et en Surface 2D, exemple 1

