chloride - $CaCl_2$ or $AlCl_3$) or a solution acidified with concentrated sulfuric acid and then to separate, by filtration, the solid product resulting from the coagulating, the solid product then being washed and dried to give a graft copolymer as a powder.

[024] The present disclosure aims to avoid at least one of the inconvenient of the state of the art.

[025] There is a need for improving the process of making a multistage polymer, by optimizing the steps involved, while allowing the obtained multistage polymer an increase of the performance as impact additive in thermoplastic compositions.

[Brief description]

[026] Surprisingly it has been found that a polymer composition in form of polymeric particles made by a multistage process comprising

at least one stage giving layer (A) comprising polymer (A1) having a glass transition temperature of less than 0°C and

at least one subsequent stage giving layer (B) comprising a polymer (B1) having a glass transition temperature of at least 45°C,

obtained by a multistage process characterized that the polymer composition comprises less than 50ppm of multivalent cations and at least 350ppm of phosphorous in form of a phosphorous containing compound with phosphorous in the oxidation stage +III or +V, yields to a product having satisfying thermal aging properties.

[0026a] In an aspect, there is provided a polymer composition in form of polymeric particles of a multistage polymer made by a multistage process comprising

at least one stage giving layer (A) comprising polymer (A1) having a glass transition temperature of less than 0°C and

at least one subsequent stage giving layer (B) comprising a polymer (B1) having a glass transition temperature of at least 45°C,

obtained by a multistage process characterized that the polymer composition comprises less than 50ppm of multivalent cations and at least 350ppm of phosphorous in form of a phosphorous containing compound with phosphorous in the oxidation stage +III or +V.

[027] Surprisingly it has also been found that a **process for** manufacturing the polymer composition comprising a multistage polymer comprising the steps of

a) polymerizing by emulsion polymerization of a monomer or monomers mixture (A_m) to obtain during this stage one layer (A) comprising polymer (A1) having a glass transition temperature of less than 0°C

b) polymerizing by emulsion polymerization in presence of the polymer obtained in step a) of a monomer or monomer mixture (B_m) to obtain during this subsequent stage a layer (B) comprising a polymer (B1) having a glass transition temperature of at least 45°C

c) coagulating the multistage polymer

d) adjusting the pH to a value between 5 to 10

e) washing the multistage polymer

f) addition of an aqueous solution comprising a phosphorous containing compound wherein the phosphorous has the oxidation stage of +III or +V

characterized that the coagulation step is not made with multivalent cations, and the polymer composition comprises at least 350ppm of phosphorous in form of a phosphorous containing compound with phosphorous in the oxidation stage +III or +V, yields to a product having satisfying thermal aging properties.

[0027a] In another aspect, there is provided a process for manufacturing a polymer composition comprising a multistage polymer comprising the steps of

a) polymerizing by emulsion polymerization of a monomer or monomer mixture (A_m) to obtain during this stage one layer (A) comprising polymer (A1) having a glass transition temperature of less then 0°C

b) polymerizing by emulsion polymerization in presence of the polymer obtained in step a) of a monomer or monomer mixture (B_m) to obtain during this subsequent stage a layer (B) comprising a polymer (B1) having a glass transition temperature of at least 45°C

c) coagulating the multistage polymer

d) adjusting the pH value after the coagulation to a value between 5 to 10

e) washing the multistage polymer

f) addition of an aqueous solution or dispersion comprising a phosphorous containing compound wherein the phosphorous has the oxidation stage of +III or +V

characterized that the coagulation step is not made with multivalent cations, and the polymer composition comprises at least 350ppm of phosphorous.

[027b] In another aspect, there is provided the use of the polymer composition as defined above or obtained by the process as defined above as impact modifier for thermoplastic polymers.

[027c] In another aspect, there is provided a thermoplastic polymer composition comprising the polymer composition as defined above or obtained by the process as defined above.

[Detailed description of the invention]

[028] According to a first aspect, the present invention relates to a polymer composition in form of polymeric particles of a multistage polymer made by a multistage process comprising

at least one stage giving layer (A) comprising polymer (A1) having a glass transition temperature of less than 0°C and

at least one subsequent stage giving layer (B) comprising a polymer (B1) having a glass transition temperature of at least 45°C,

obtained by a multistage process characterized that the polymer composition comprises less than 50ppm of multivalent cations and at least 350ppm of phosphorous in form of a phosphorous containing compound with phosphorous in the oxidation stage +III or +V.

[029] According to a second aspect the present invention relates to a process for manufacturing a polymer composition comprising a multistage polymer comprising the steps of