CLAIMS

1. A continuous method for manufacturing a rubber masterbatch, comprising:

step 1): a filler is added to a rubber solution so as to form a rubber/filler/solvent mixture under stirring;

step 2): the rubber/filler/solvent mixture in step 1) is coagulated so as to obtain a mixture of rubber/filler complex and solvent; and

step 3): the solvent is removed and the mixture is dried so as to obtain a rubber/filler masterbatch;

wherein the coagulating in step 2) includes one or more of a flocculant flocculation method, heating method, and desolvation method, or a combination thereof;

wherein the drying in step 3) comprises that the mixture obtained in step 2) is transferred to a heating conveyor belt dryer, carried out heat drying in vacuum or an inert gas, and the volatilized solvent and the unreacted monomer in rubber synthesis are sent into a condenser and a fractionation column for recovery; or the drying in step 3) comprises that the mixture obtained in step 2) is spray dried or flashed, the heating medium used is an inert gas or water vapor, and the volatilized solvent and the unreacted monomer in rubber synthesis are sent into a condenser and a fractionation column for recovery.

2. The method according to claim 1, wherein the solvent removed in step 3) is recovered for recycling.

3. The method according to claim 1, wherein one or more additives selected from oil, anti-aging agent, coupling agent, active agent, antioxidant, flame retardant, heat stabilizer, light stabilizer, dye, pigment, vulcanizing agent and accelerator are added in step 1) and/or step 2).

4. The method according to any one of claims 1-3, wherein water vapor is used as the heating medium, the solid mixture obtained after drying will contain water, and then carries out vacuum drying, heat drying or extrusion heat drying, so as to obtain a rubber/filler masterbatch.

5. The method according to any one of claims 1-3, wherein the inert gas is nitrogen.

6. The method according to claim 4, wherein the heat drying is oven drying or air drying.

7. The method according to claim 4, wherein the extrusion heat drying comprises first removing water by extrusion, then carrying out a further drying.

8. The method according to claim 7, wherein the further drying is air drying, oven drying,

or mechanical drying.

9. The method according to claim 8, wherein the mechanical drying is drying by selecting one or more of an open mill, kneader, internal mixer, continuous internal mixer, single-screw extruder, and twin-screw extruder.

10. A method for manufacturing a rubber article, the method comprising:

manufacturing a rubber masterbatch by a method according to any one of claims 1 to 9, and

processing the rubber masterbatch into a rubber article.