CLAIMS

1. A non-conductive polymer material for applying a non-conductive coat to a surface, the non-conductive polymer material comprising:

a physical blend including

a first polymer selected from the group consisting of polyvinyl acetate and polyethylene oxide;

a second polymer being polyvinylidene fluoride; and

a solvent selected from the group consisting of dimethyl sulfoxide, tetrahydrofuran, toluene and dimethylformamide, wherein

the first polymer and the second polymer are dissolved in the solvent, and wherein

a weight proportion of the first polymer and the second polymer in the non-conductive polymer material is selected based on the surface that the non-conductive polymer material is to be applied to, or another material that is to be in contact with the coated surface, so that the coated surface resists charging against the another material.

2. The non-conductive polymer material according to claim 1, wherein the first polymer is polyvinyl acetate.

3. The non-conductive polymer material according to claim 2, wherein the first polymer is present in the non-conductive polymer material in an amount of 40% to 85% based on the total weight of the first polymer and the second polymer in the non-conductive polymer material.

4. The non-conductive polymer material according to claim 1, wherein the first polymer is polyethylene oxide.

5. The non-conductive polymer material according to claim 4, wherein the first polymer is present in the non-conductive polymer material in an amount of 55% to 70% based on the total weight of the first polymer and the second polymer in the non-conductive polymer material.

6. The non-conductive polymer material according to claim 1, wherein the solvent is dimethylformamide.

7. A method of eliminating generation of electrostatic charge at source on a surface when the surface contacts another material, the method comprising:

applying at least one layer of a non-conductive polymer material on the surface, wherein the non-conductive polymer material comprises a physical blend of a first polymer selected from the group consisting of polyvinyl acetate and polyethylene oxide, and a second polymer being polyvinylidene fluoride, with the first polymer and the second polymer dissolved in a solvent selected from the group consisting of dimethyl sulfoxide, tetrahydrofuran, toluene and dimethylformamide, and a weight

proportion of the first polymer and the second polymer in the non-conductive polymer material is selected based on the surface or the another material that is to be in contact with the surface;

evaporating the solvent to form a non-conductive coat comprising the first polymer and the second polymer on the surface, wherein the coated surface resists charging against the another material.

8. The method according to claim 7, further comprising subjecting the surface to plasma treatment prior to applying the non-conductive polymer material on the surface.

9. The method according to claim 7, wherein the first polymer is polyvinyl acetate.

10. The method according to claim 9, wherein the first polymer is present in the non-conductive polymer material in an amount of 40% to 85% based on the total weight of the first polymer and the second polymer in the non-conductive polymer material.

11. The method according to claim 7, wherein the first polymer is polyethylene oxide.

12. The method according to claim 11, wherein the first polymer is present in the non-conductive polymer material in an amount of 55% to 70% based on the total weight of the first polymer and the second polymer in the non-conductive polymer material.

13. The method according to claim 7, wherein the solvent is dimethylformamide.

14. The method according to claim 7, wherein the method comprises applying the at least one layer of the non-conductive polymer material to the surface made of a material selected from the group consisting of thermoplastic polymer, stainless steel and glass.

15. The method according to claim 14, wherein the thermoplastic polymer is selected from the group consisting of polypropylene, polyethylene terephthalate and polyethylene.

16. The method according to claim 7, wherein the surface is an internal surface of a receptacle.

17. The method according to claim 7, wherein the surface is a surface of a film or a cover tape.

18. A method of preventing a surface from fouling due to adhesion of particles or powders, the method comprising

applying at least one layer of a non-conductive polymer material on the surface, wherein the non-conductive polymer material comprises a physical blend of a first polymer selected from the group consisting of polyvinyl acetate and polyethylene oxide, and a second polymer being polyvinylidene fluoride, with the first polymer and the second polymer dissolved in a solvent selected from the group

consisting of dimethyl sulfoxide, tetrahydrofuran, toluene and dimethylformamide, and a weight proportion of the first polymer and the second polymer in the non-conductive polymer material is selected based on the surface or a material of the particles or powders;

evaporating the solvent to form a non-conductive coat comprising the first polymer and the second polymer on the surface, wherein the coated surface resists charging against the particles or powders.

19. The method of claim 18, the first polymer is polyvinyl acetate, and the first polymer is present in the non-conductive polymer material in an amount of 40% to 85% based on the total weight of the first polymer and the second polymer in the non-conductive polymer material.

20. The method of claim 18, the first polymer is polyethylene oxide, and the first polymer is present in the non-conductive polymer material in an amount of 55% to 70% based on the total weight of the first polymer and the second polymer in the non-conductive polymer material.

21. The method of any one of claims 18 to 20, wherein the at least one layer of the non-conductive polymer material is applied on the surface comprising a material selected from the group consisting of thermoplastic polymer, stainless steel and glass.

22. The method of claim 21, wherein the particles or powders are pharmaceutical or food powders.

23. The method of any one of claims 18 to 22, wherein applying at least one layer of a non-conductive polymer material on the surface comprises dipping the surface into the non-conductive polymer material.

24. The method of any one of claims 18 to 23, wherein evaporating the solvent to form a non-conductive coat comprises heating the non-conductive polymer material that is applied on the surface.