CLAIMS:

1. A release film comprising:

a base layer formed of a polyester resin; and

a surface layer formed of a tetrafluoroethylene resin comprising an electrically conductive filler, wherein

the release film has a surface resistivity Rs of 1×10^{11} Ω or less,

the electrically conductive filler comprises carbon black,

the tetrafluoroethylene resin is a cured product of a tetrafluoroethylene resin composition containing a reactive functional group-containing tetrafluoroethylene polymer and a curing agent,

the reactive functional group-containing tetrafluoroethylene polymer contains a polymer unit based on a hydroxy group-containing monomer and a polymer unit based on perfluoroolefin,

the tetrafluoroethylene resin comprises silicon dioxide particles,

an average particle size of the silicon dioxide particles is 1 μm to 15 μm, as determined by laser diffraction particle size analysis, and

an amount of the silicon dioxide particles relative to 100 parts by mass of the tetrafluoroethylene resin is 5.15 parts by mass to 15.79 parts by mass.

2. The release film according to claim 1, wherein the cured product is a cured product of the tetrafluoroethylene resin composition applied to a surface of the base layer.

3. The release film according to claim 1 or 2, wherein the carbon black comprises ketjen black.

4. The release film according to claim 3, wherein the ketjen black has a DBP oil absorption amount of 250 ml/100 g or more.

5. The release film according to claim 3 or 4, wherein the carbon black further comprises furnace black, and

a DBP oil absorption amount of the furnace black is 200 ml/100 g or less.

6. The release film according to claim 1 or 2, wherein the carbon black comprises furnace black whose DBP oil absorption amount is 200 ml/100 g or less.

7. The release film according to any one of claims 1 to 6, wherein the curing agent is an isocyanate curing agent.

8. The release film according to claim 7, wherein the isocyanate curing agent is a single polyisocyanate or a combination of two or more polyisocyanates selected from isocyanurate-type polyisocyanates, adduct-type polyisocyanates, and biuret-type polyisocyanates.

9. The release film according to any one of claims 1 to 8, wherein an amount of the electrically conductive filler contained in the

tetrafluoroethylene resin composition is 1 part by mass to 25 parts by mass relative to 100 parts by mass of the reactive functional group-containing tetrafluoroethylene polymer.

10. The release film according to any one of claims 1 to 9, wherein the polyester resin is a polyethylene terephthalate resin.

11. The release film according to any one of claims 1 to 10, wherein the polyester resin has a glass transition temperature of 60°C to 95°C.

12. The release film according to any one of claims 1 to 11, wherein the surface layer is laminated on one face of two faces of the base layer.

13. The release film according to claim 12, wherein on another face of the two faces of the base layer, a surface layer formed of a fluororesin is laminated.

14. The release film according to any one of claims 1 to 13, wherein the release film is to be used for sealing a semiconductor device.

15. The release film according to claim 14, wherein, in the sealing, the release film is placed so that the surface layer that is formed of the tetrafluoroethylene resin comprising the electrically conductive filler

comes into contact with a sealing resin.

16. The release film according to any one of claims 1 to 15, used for transfer molding or compression molding.

17. The release film according to any one of claims 1 to 16, used for molding two or more times.

18. A method for manufacturing a release film, the method comprising:

a surface layer forming step of forming, on one face of two faces of a base layer that is formed of a polyester resin, a surface layer formed of a tetrafluoroethylene resin comprising an electrically conductive filler, wherein

the electrically conductive filler comprises carbon black,

the tetrafluoroethylene resin is a cured product of a tetrafluoroethylene resin composition containing a reactive functional group-containing tetrafluoroethylene polymer and a curing agent,

the reactive functional group-containing tetrafluoroethylene polymer contains a polymer unit based on a hydroxy group-containing monomer and a polymer unit based on perfluoroolefin,

the tetrafluoroethylene resin comprises silicon dioxide particles,

an average particle size of the silicon dioxide particles is 1 μm to 15 μm, as determined by laser diffraction particle size analysis,

an amount of the silicon dioxide particles relative to 100 parts by

mass of the tetrafluoroethylene resin is 5.15 parts by mass to 15.79 parts by mass, and

the manufactured release film has a surface resistivity Rs of 1×10^{11} Ω or less.

19. The method according to claim 18, wherein in the surface layer forming step, the tetrafluoroethylene resin composition applied to the surface of the base layer is cured to form the cured product.