CLAIMS

1. A laminated film, comprising:

a layer of shrinkable film, of which the storage elastic modulus E' at 180°C is at least 70 MPa, and the thermal shrinkage in 30 minutes at 180°C, with reference to 20°C, in each of the machine direction (MD) and the transverse direction (TD), is at least 3%, and

a fluororesin layer present on one side or both sides of the layer of shrinkable film, wherein at least one side of the laminated film is a surface of the fluororesin layer.

2. The laminated film according to Claim 1, wherein the storage elastic modulus E’ at 180°C of the laminated film is at least 70 MPa, and the thermal shrinkage in 30 minutes at 180°C, with reference to 20°C in each of MD and TD of the laminated film is at least 2%.

3. The laminated film according to Claim 1, wherein the fluororesin layer is present on both sides of the layer of shrinkable film.

4. The laminated film according to Claim 1, wherein an adhesive layer is further present between the layer of shrinkable film and the fluororesin layer.

5. The laminated film according to Claim 1, wherein the shrinkable film is a biaxially stretched film.

6. The laminated film according to Claim 1, wherein the shrinkable film is a shrinkable film composed of at least one type of resin selected from the group consisting of a polyamide resin, a polyester resin, a polystyrene resin, and a biological resin.

7. The laminated film according to Claim 1, wherein the shrinkable film is a biaxially stretched polyamide resin film.

8. The laminated film according to Claim 1, wherein the fluororesin layer comprises a

fluororesin made of a fluoroolefin polymer.

9. The laminated film according to Claim 8, wherein the fluoroolefin polymer is an ethylene-tetrafluoroethylene copolymer.

10. The laminated film according to Claim 1, wherein the fluororesin layer is a layer of a fluororesin film.

11. The laminated film according to Claim 1, which is used as a release film.

12. The laminated film according to Claim 11, wherein the release film is a release film which is to be disposed in a recess of a mold so as to be in contact with a sealing resin, in a step of resin sealing in the production of a semiconductor element.

13. A method for producing a semiconductor element comprising a substrate, a semiconductor chip, a connecting terminal and a resin sealing portion made of a cured product of a curable resin, by using a compression molding apparatus comprising an upper mold and a lower mold, the method comprising:

disposing a structure having the substrate, the semiconductor chip and the connecting terminal on one of the upper mold and the lower mold,

disposing the laminate film according to Claim 1, as a release film, so as to cover a recess provided in the other of the upper mold and the lower mold, and so that the surface of the fluororesin layer faces the molding space of the mold, and bringing it in close contact with the surface of the recess,

disposing a curable resin between the upper mold and the lower mold, and clamping the upper mold and the lower mold and moving the bottom surface of the recess thereby to compress the curable resin and at the same time to thermoset the curable resin to form a resin sealing portion.

14. The method for producing a semiconductor element according to Claim 13, wherein the thickness of the resin sealing portion is from 0.1 to 0.7 mm.

15. The method for producing a semiconductor element according to Claim 13, wherein the depth of the recess at the time of bringing the said laminated film in close contact with the surface of the recess is deeper than the thickness of the resin sealing portion, and is from 0.125 to 1.1 mm.

16. The laminated film according to Claim 1, wherein the shrinkable film is a biaxially stretched film, and wherein the laminated film is produced by (A) laminating a film of fluororesin on one or both sides of the biaxially stretched film, or (B) applying a coating liquid comprising a fluororesin and a liquid medium on one side or both sides of the biaxially stretched film, and evaporating and removing the liquid medium to form the fluororesin layer.

17. The laminated film according to Claim 1, wherein the fluororesin layer is made of a fluoroolefin polymer comprising ethylene units, tetrafluoroethylene units, and units of a third monomer.

18. The laminated film according to Claim 17, wherein the third monomer is at least one selected from the group consisting of (a1) a fluoroolefin having 3 or less carbon atoms other than tetrafluoroethylene, (a2) a polyfluoroalkylethylene represented by $X^1(CF_2)_nCX^2=CH_2$ (wherein X^1 and X^2 are each independently a hydrogen atom or a fluorine atom, and n is an integer of from 2 to 8), (a3) a fluorovinyl ether, (a4) a functional group-containing fluorovinyl ether, (a5) a fluorinated monomer having an aliphatic ring structure, (b1) an olefin other than ethylene, (b2) a vinyl ester, (b3) a vinyl ether, and (b4) an unsaturated acid anhydride.