CLAIMS

[Claim 1]

A back surface protective film-forming composite comprising a protection layer and a back surface protective film-forming film, the protection layer and the back surface protective film-forming film being laminated, the back surface protective film-forming composite for use in a method of manufacturing a first laminate, the protection layer is a sheet with a pressure sensitive adhesive layer or a release agent layer on a base material, or a base material consisting of a resin film,

the back surface protective film-forming film has a monolayer structure, the method comprising:

a first lamination step of affixing the back surface protective film-forming film to a back surface of a semiconductor substrate to obtain a second laminate, the second laminate comprising the semiconductor substrate, the back surface protective film-forming film, and the protection layer, which are laminated in this order;

a curing step of curing the back surface protective film-forming film of the second laminate to form a back surface protective film; and

a conveyance step of conveying the second laminate from the first lamination step to the curing step,

wherein the first laminate comprises the semiconductor substrate, the back surface protective film, and the protection layer, which are laminated in this order.

[Claim 2]

A back surface protective film-forming composite comprising a protection layer and a back surface protective film-forming film, the protection layer and the back surface protective film-forming film being laminated, the back surface protective film-forming composite for use in a method of manufacturing a third laminate, the protection layer is a

sheet with a pressure sensitive adhesive layer or a release agent layer on a base material, or a base material consisting of a resin film,

the back surface protective film-forming film has a monolayer structure, the method comprising:

a first lamination step of affixing the back surface protective film-forming film to a back surface of a semiconductor substrate to obtain a second laminate, the second laminate comprising the semiconductor substrate, the back surface protective film-forming film, and the protection layer, which are laminated in this order;

a second lamination step of affixing a support sheet to the protection layer of the second laminate to obtain a third laminate, the third laminate comprising the semiconductor substrate, the back surface protective film-forming film, the protection layer, and the support sheet, which are laminated in this order; and

a conveyance step of conveying the second laminate from the first lamination step to the second lamination step.

[Claim 3]

A method of manufacturing a first laminate, the first laminate comprising a semiconductor substrate, a back surface protective film, and a protection layer, which are laminated in this order, the method comprising:

a first lamination step of affixing the back surface protective film-forming film of the back surface protective film-forming composite described in claim 1 to a back surface of the semiconductor substrate to obtain a second laminate, the second laminate comprising the semiconductor substrate, the back surface protective film-forming film, and the protection layer, which are laminated in this order;

a curing step of curing the back surface protective film-forming film of the second laminate to form a back surface protective film; and

a conveyance step of conveying the second laminate from the first lamination step to the curing step.

[Claim 4]

A method of manufacturing a third laminate, the third laminate comprising a semiconductor substrate, a back surface protective film-forming film, a protection layer, and a support sheet, which are laminated in this order, the method comprising:

a first lamination step of affixing the back surface protective film-forming film of the back surface protective film-forming composite described in claim 2 to a back surface of the semiconductor substrate to obtain a second laminate, the second laminate comprising the semiconductor substrate, the back surface protective film-forming film, and the protection layer, which are laminated in this order;

a second lamination step of affixing a support sheet to the protection layer of the second laminate to obtain a third laminate, the third laminate comprising the semiconductor substrate, the back surface protective film-forming film, the protection layer, and the support sheet, which are laminated in this order; and

a conveyance step of conveying the second laminate from the first lamination step to the second lamination step.

[Claim 5]

A method of manufacturing a semiconductor device equipped with a back surface protective film, the method comprising:

a second lamination step of affixing a support sheet to the protection layer of a first laminate manufactured by the manufacturing method described in claim 3 to obtain a fourth laminate, the fourth laminate comprising the semiconductor substrate, the back surface protective film, the protection layer, and the support sheet, which are laminated in this order;

a step of dicing the semiconductor substrate and the back surface protective film of the fourth laminate to form a semiconductor device equipped with a back surface protective film; and

a step of picking up the semiconductor device equipped with a back surface protective film from the support sheet.

[Claim 6]

A method of manufacturing a semiconductor device equipped with a back surface protective film, the method comprising:

a curing step of curing the back surface protective film-forming film of a third laminate manufactured by the manufacturing method described in claim 4 to form a back surface protective film and obtain a fourth laminate, the fourth laminate comprising the semiconductor substrate, the back surface protective film, the protection layer, and the support sheet, which are laminated in this order;

a step of dicing the semiconductor substrate and the back surface protective film of the fourth laminate to form a semiconductor device equipped with a back surface protective film; and

a step of picking up the semiconductor device equipped with a back surface protective film from the support sheet.

[Claim 7]

A method of manufacturing a semiconductor device equipped with a back surface protective film, the method comprising:

a step of dicing the semiconductor substrate and the back surface protective film-forming film of the third laminate manufactured by the manufacturing method described in claim 4 to form a semiconductor device equipped with a back surface protective film-forming film;

a curing step of curing the back surface protective film-forming film to form a back surface protective film; and

a step of picking up the semiconductor equipped with a back surface protective film-forming film or a semiconductor device equipped with a back surface protective film from the support sheet.