

Claims

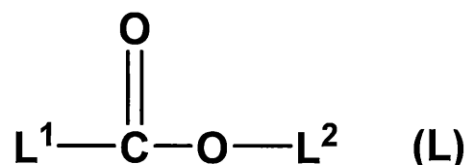
1. A semiconductor substrate cleaning method comprising a step of removing an adhesive layer provided on a semiconductor substrate by use of a remover composition, wherein

the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S), and the adhesive component (S) comprises a siloxane adhesive containing a polyorganosiloxane component (A) which is curable through hydrosilylation;

the remover composition contains a solvent but no salt; and

the solvent includes an organic solvent represented by formula (L):

[F1]



(wherein each of L¹ and L² represents a C1 to C6 alkyl group, and the sum of the number of carbon atoms of the alkyl group L¹ and that of the alkyl group L² is 6 or less) in an amount of 80 mass% or more.

2. A semiconductor substrate cleaning method according to claim 1, wherein the solvent includes the organic solvent represented by formula (L) in an amount of 85 mass% or more.

3. A semiconductor substrate cleaning method according to claim 2, wherein the solvent is formed of the organic solvent represented by formula (L).

4. A semiconductor substrate cleaning method according to any one of claims 1 to 3, wherein L¹ is a methyl group.

5. A semiconductor substrate cleaning method according to claim 4, wherein L² is a butyl group or a pentyl group.

6. A semiconductor substrate cleaning method according to any one of claims 1 to 5, wherein the adhesive component (S) further comprises at least one species selected from among an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.

7. A processed semiconductor substrate production method comprising:

a first step of producing a laminate having a semiconductor substrate, a support substrate, and an adhesive layer formed from an adhesive composition;

a second step of processing the semiconductor substrate of the produced laminate;

a third step of separating the semiconductor substrate and the adhesive layer from the support substrate; and

a fourth step of removing the adhesive layer on the semiconductor substrate by use of a remover composition, wherein

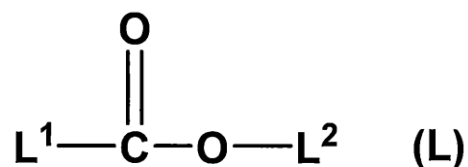
the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component

(S), and the adhesive component (S) comprises a siloxane adhesive containing a polyorganosiloxane component (A) which is curable through hydrosilylation;

the remover composition contains a solvent but no salt;
and

the solvent includes an organic solvent represented by formula (L):

[F2]



(wherein each of L¹ and L² represents a C1 to C6 alkyl group, and the sum of the number of carbon atoms of the alkyl group L¹ and that of the alkyl group L² is 6 or less) in an amount of 80 mass% or more.

8. A processed semiconductor substrate production method according to claim 7, wherein the solvent includes the organic solvent represented by formula (L) in an amount of 85 mass% or more.

9. A processed semiconductor substrate production method according to claim 8, wherein the solvent is formed of the organic solvent represented by formula (L).

10. A processed semiconductor substrate production method according to any one of claims 7 to 9, wherein L¹ is a methyl group.

11. A processed semiconductor substrate production method according to claim 10, wherein L² is a butyl group or a pentyl group.

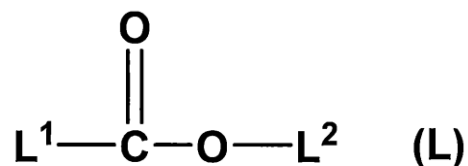
12. A processed semiconductor substrate production method according to any one of claims 7 to 11, wherein the adhesive component (S) further comprises at least one species selected from among an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.

13. A remover composition for use in removal of an adhesive layer provided on a semiconductor substrate during cleaning the semiconductor substrate, which composition contains a solvent but no salt, wherein

the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S), and the adhesive component (S) comprises a siloxane adhesive containing a polyorganosiloxane component (A) which is curable through hydrosilylation;

the solvent includes an organic solvent represented by formula (L):

[F3]



(wherein each of L¹ and L² represents a C1 to C6 alkyl group, and the sum of the number of carbon atoms of the alkyl group

L¹ and that of the alkyl group L² is 6 or less) in an amount of 80 mass% or more.

14. A remover composition according to claim 13, wherein the solvent includes the organic solvent represented by formula (L) in an amount of 85 mass% or more.

15. A remover composition according to claim 14, wherein the solvent is formed of the organic solvent represented by formula (L).

16. A remover composition according to any one of claims 13 to 15, wherein L¹ is a methyl group.

17. A remover composition according to claim 16, wherein L² is a butyl group or a pentyl group.

18. A remover composition according to any one of claims 13 to 17, wherein the adhesive component (S) further comprises at least one species selected from among an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.