

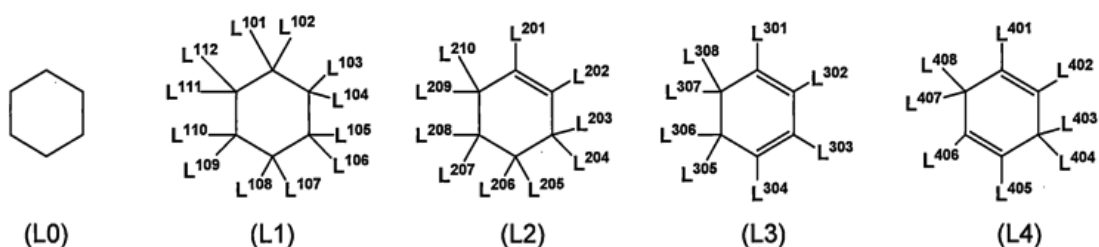
Claims

~~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, characterized in that~~

~~the remover composition contains a solvent but no salt; and~~

~~the solvent includes an organic solvent represented by any of formulae (L0) to (L4):~~

~~{F1}~~



~~(wherein each of L¹⁰¹ to L¹¹² independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L¹⁰¹ to L¹¹² represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group; each of L²⁰¹ to L²¹⁰ independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L²⁰¹ to L²¹⁰ represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group; each of L³⁰¹ to L³⁰⁸ independently represents a hydrogen atom,~~

~~a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L³⁰¹ to L³⁰⁸ represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group; and each of L⁴⁰¹ to L⁴⁰⁸ independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L⁴⁰¹ to L⁴⁰⁸ represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group) in an amount of 80 mass% or more.~~

~~2. A semiconductor substrate cleaning method according to claim 1, wherein the solvent includes an organic solvent represented by any of formulae (L0) to (L4) in an amount of 85 mass% or more.~~

~~3. A semiconductor substrate cleaning method according to claim 2, wherein the solvent is formed of an organic solvent represented by any of formulae (L0) to (L4).~~

~~4. A semiconductor substrate cleaning method according to any one of claims 1 to 3, wherein~~

~~the C1 to C5 alkyl group is a methyl group, an ethyl group, an n-propyl group, or an isopropyl group;~~

~~the C2 to C5 alkenyl group is an ethenyl group, a 1-methylethenyl group, or a 2-methylethenyl group; and~~

~~the C2 to C5 alkynyl group is an ethynyl group or a 2-methylethynyl group.~~

~~5. A semiconductor substrate cleaning method according to claim 4, wherein~~

~~one or two of the groups L¹⁰¹ to L¹¹² are a C1 to C5~~

~~alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and each of the remaining groups is a hydrogen atom;
— one or two of the groups L²⁰¹ to L²¹⁰ are a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and each of the remaining groups is a hydrogen atom;
— one or two of the groups L³⁰¹ to L³⁰⁸ are a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and each of the remaining groups is a hydrogen atom;
and~~

~~— one or two of the groups L⁴⁰¹ to L⁴⁰⁸ are a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and each of the remaining groups is a hydrogen atom.~~

~~6. A semiconductor substrate cleaning method according to any one of claims 1 to 5, wherein the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.~~

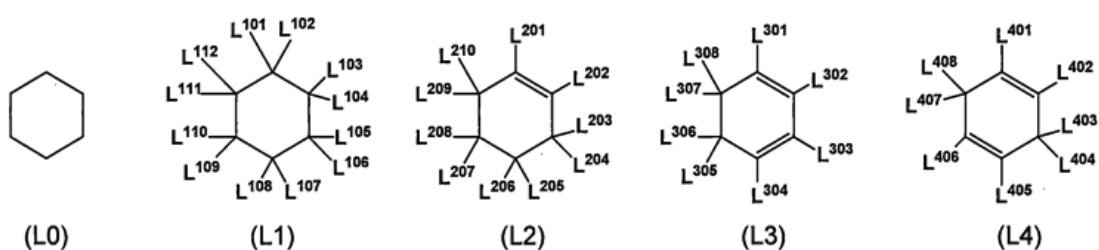
~~7. A semiconductor substrate cleaning method according to claim 6, wherein the adhesive component (S) contains a siloxane adhesive.~~

~~8. A semiconductor substrate cleaning method according to claim 7, wherein the siloxane adhesive contains a polyorganosiloxane component (A) which is curable through hydrosilylation.~~

~~9. 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, characterized in that~~
- ~~— the remover composition contains a solvent but no salt; and~~
- ~~— the solvent includes an organic solvent represented by any of formulae (L0) to (L4):~~

~~[F2]~~



~~(wherein each of L¹⁰¹ to L¹¹² independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L¹⁰¹ to L¹¹² represents a C1 to C5 alkyl group, a C2 to C5 alkenyl~~

~~group, or a C2 to C5 alkynyl group; each of L²⁰¹ to L²¹⁰ independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L²⁰¹ to L²¹⁰ represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group; each of L³⁰¹ to L³⁰⁸ independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L³⁰¹ to L³⁰⁸ represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group; and each of L⁴⁰¹ to L⁴⁰⁸ independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L⁴⁰¹ to L⁴⁰⁸ represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group) in an amount of 80 mass% or more.~~

~~10. A processed semiconductor substrate production method according to claim 9, wherein the solvent includes the organic solvent represented by any of formulae (L0) to (L4) in an amount of 85 mass% or more.~~

~~11. A processed semiconductor substrate production method according to claim 10, wherein the solvent is formed of the organic solvent represented by any of formulae (L0) to (L4).~~

~~12. A processed semiconductor substrate production method according any one of claims 9 to 11, wherein~~

~~the C1 to C5 alkyl group is a methyl group, an ethyl group, an n-propyl group, or an isopropyl group;~~

~~the C2 to C5 alkenyl group is an ethenyl group, a 1-methylethenyl group, or a 2-methylethenyl group; and~~

~~the C2 to C5 alkynyl group is an ethynyl group or a 2-methylethynyl group.~~

~~13. A processed semiconductor substrate production method according to claim 12, wherein~~

~~one or two of the groups L¹⁰¹ to L¹¹² are a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and each of the remaining groups is a hydrogen atom;~~

~~one or two of the groups L²⁰¹ to L²¹⁰ are a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and each of the remaining groups is a hydrogen atom;~~

~~one or two of the groups L³⁰¹ to L³⁰⁸ are a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and each of the remaining groups is a hydrogen atom; and~~

~~one or two of the groups L⁴⁰¹ to L⁴⁰⁸ are a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and each of the remaining groups is a hydrogen atom.~~

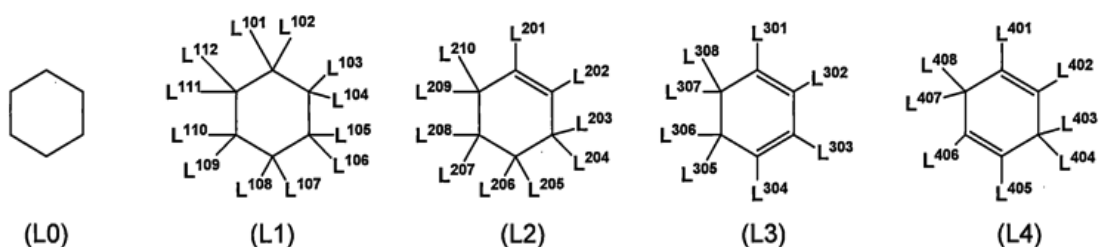
~~14. A processed semiconductor substrate production method according to any one of claims 9 to 13, wherein the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.~~

~~15. A processed semiconductor substrate production method according to claim 14, wherein the adhesive component (S) contains a siloxane adhesive.~~

~~16. A processed semiconductor substrate production method according to claim 15, wherein the siloxane adhesive contains a polyorganosiloxane component (A) which is curable through hydrosilylation.~~

~~17. 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, characterized in that the solvent includes an organic solvent represented by any of formulae (L0) to (L4):~~

~~[F3]~~



~~(wherein each of L¹⁰¹ to L¹¹² independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L¹⁰¹ to L¹¹² represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group; each of L²⁰¹ to L²¹⁰ independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group,~~

~~and at least one of L²⁰¹ to L²¹⁰ represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group; each of L³⁰¹ to L³⁰⁸ independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L³⁰¹ to L³⁰⁸ represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group; and each of L⁴⁰¹ to L⁴⁰⁸ independently represents a hydrogen atom, a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group, and at least one of L⁴⁰¹ to L⁴⁰⁸ represents a C1 to C5 alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl group) in an amount of 80 mass% or more.~~

~~18. A remover composition according to claim 17, wherein the solvent includes the organic solvent represented by any of formulae (L0) to (L4) in an amount of 85 mass% or more.~~

~~19. A remover composition according to claim 18, wherein the solvent is formed of the organic solvent represented by any of formulae (L0) to (L4).~~

~~20. A remover composition according any one of claims 17 to 19, wherein~~

~~the C1 to C5 alkyl group is a methyl group, an ethyl group, an n-propyl group, or an isopropyl group;~~

~~the C2 to C5 alkenyl group is an ethenyl group, a 1-methylethenyl group, or a 2-methylethenyl group; and~~

~~the C2 to C5 alkynyl group is an ethynyl group or a 2-methylethynyl group.~~

~~21. A remover composition according to claim 20,
wherein~~

~~one or two of the groups L¹⁰¹ to L¹¹² are a C1 to C5
alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl
group, and each of the remaining groups is a hydrogen atom;~~

~~one or two of the groups L²⁰¹ to L²¹⁰ are a C1 to C5
alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl
group, and each of the remaining groups is a hydrogen atom;~~

~~one or two of the groups L³⁰¹ to L³⁰⁸ are a C1 to C5
alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl
group, and each of the remaining groups is a hydrogen atom;
and~~

~~one or two of the groups L⁴⁰¹ to L⁴⁰⁸ are a C1 to C5
alkyl group, a C2 to C5 alkenyl group, or a C2 to C5 alkynyl
group, and each of the remaining groups is a hydrogen atom.~~

~~22. A remover composition according to any one of
claims 17 to 21, wherein the adhesive layer is a film formed
by use of an adhesive composition which contains an adhesive
component (S) containing at least one species selected from
among a siloxane adhesive, an acrylic resin adhesive, an
epoxy resin adhesive, a polyamide adhesive, a polystyrene
adhesive, a polyimide adhesive, and a phenolic resin
adhesive.~~

~~23. A remover composition according to claim 22,
wherein the adhesive component (S) contains a siloxane
adhesive.~~

~~24. A remover composition according to claim 23,~~

~~wherein the siloxane adhesive contains a polyorganosiloxane component (A) which is curable through hydrosilylation.~~

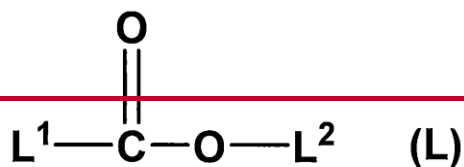
Claims

~~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, characterized in that~~

~~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 layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.~~

~~7. A semiconductor substrate cleaning method according to claim 6, wherein the adhesive component (S) contains a siloxane adhesive.~~

~~8. A semiconductor substrate cleaning method according to claim 7, wherein the siloxane adhesive contains a polysiloxane component (A) which is curable through hydrosilylation.~~

~~9. 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;~~

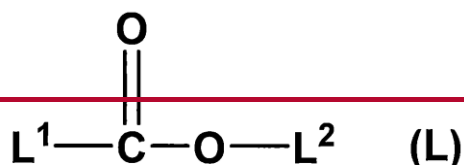
~~a third step of separating the semiconductor substrate and the adhesive layer from the support substrate; and~~

~~— a fourth step of removing the adhesive layer on the semiconductor substrate by use of a remover composition, characterized in that~~

~~— 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.~~

~~— 10. A processed semiconductor substrate production method according to claim 9, wherein the solvent includes the organic solvent represented by formula (L) in an amount of 85 mass% or more.~~

~~— 11. A processed semiconductor substrate production method according to claim 10, wherein the solvent is formed of the organic solvent represented by formula (L).~~

~~— 12. A processed semiconductor substrate production method according to any one of claims 9 to 11, wherein L¹ is a methyl group.~~

~~— 13. A processed semiconductor substrate production~~

~~method according to claim 12, wherein L² is a butyl group or a pentyl group.~~

~~14. A processed semiconductor substrate production method according to any one of claims 9 to 13, wherein the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.~~

~~15. A processed semiconductor substrate production method according to claim 14, wherein the adhesive component (S) contains a siloxane adhesive.~~

~~16. A processed semiconductor substrate production method according to claim 15, wherein the siloxane adhesive contains a polysiloxane component (A) which is curable through hydrosilylation.~~

~~17. 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, characterized in that~~

~~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.~~

~~18. A remover composition according to claim 17, wherein the solvent includes the organic solvent represented by formula (L) in an amount of 85 mass% or more.~~

~~19. A remover composition according to claim 18, wherein the solvent is formed of the organic solvent represented by formula (L).~~

~~20. A remover composition according to any one of claims 17 to 19, wherein L¹ is a methyl group.~~

~~21. A remover composition according to claim 20, wherein L² is a butyl group or a pentyl group.~~

~~22. A remover composition according to any one of claims 17 to 21, wherein the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.~~

~~23. A remover composition according to claim 22, wherein the adhesive component (S) contains a siloxane adhesive.~~

~~24. A remover composition according to claim 23, wherein the siloxane adhesive contains a polysiloxane~~

~~component (A) which is curable through hydrosilylation.~~

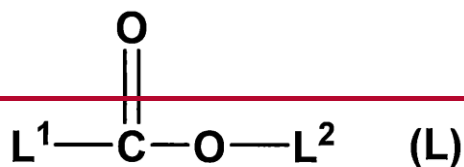
Claims

~~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, characterized in that~~

~~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 layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.~~

~~7. A semiconductor substrate cleaning method according to claim 6, wherein the adhesive component (S) contains a siloxane adhesive.~~

~~8. (Amended) A semiconductor substrate cleaning method according to claim 7, wherein the siloxane adhesive contains a polyorganosiloxane component (A) which is curable through hydrosilylation.~~

~~9. 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;~~

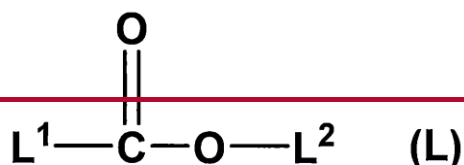
~~a third step of separating the semiconductor substrate and the adhesive layer from the support substrate; and~~

~~— a fourth step of removing the adhesive layer on the semiconductor substrate by use of a remover composition, characterized in that~~

~~— 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.~~

~~— 10. A processed semiconductor substrate production method according to claim 9, wherein the solvent includes the organic solvent represented by formula (L) in an amount of 85 mass% or more.~~

~~— 11. A processed semiconductor substrate production method according to claim 10, wherein the solvent is formed of the organic solvent represented by formula (L).~~

~~— 12. A processed semiconductor substrate production method according to any one of claims 9 to 11, wherein L¹ is a methyl group.~~

~~— 13. A processed semiconductor substrate production~~

~~method according to claim 12, wherein L² is a butyl group or a pentyl group.~~

~~14. A processed semiconductor substrate production method according to any one of claims 9 to 13, wherein the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.~~

~~15. A processed semiconductor substrate production method according to claim 14, wherein the adhesive component (S) contains a siloxane adhesive.~~

~~16. (Amended) A processed semiconductor substrate production method according to claim 15, wherein the siloxane adhesive contains a polyorganosiloxane component (A) which is curable through hydrosilylation.~~

~~17. 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, characterized in that~~

~~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.~~

~~18. A remover composition according to claim 17, wherein the solvent includes the organic solvent represented by formula (L) in an amount of 85 mass% or more.~~

~~19. A remover composition according to claim 18, wherein the solvent is formed of the organic solvent represented by formula (L).~~

~~20. A remover composition according to any one of claims 17 to 19, wherein L¹ is a methyl group.~~

~~21. A remover composition according to claim 20, wherein L² is a butyl group or a pentyl group.~~

~~22. A remover composition according to any one of claims 17 to 21, wherein the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.~~

~~23. A remover composition according to claim 22, wherein the adhesive component (S) contains a siloxane adhesive.~~

~~24. (Amended) A remover composition according to claim 23, wherein the siloxane adhesive contains a~~

~~polyorganosiloxane component (A) which is curable through hydrosilylation.~~

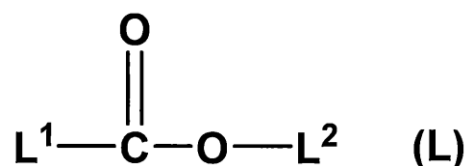
Claims

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,
characterized in that

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 layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.

7. A semiconductor substrate cleaning method according to claim 6, wherein the adhesive component (S) contains a siloxane adhesive.

8. A semiconductor substrate cleaning method according to claim 7, wherein the siloxane adhesive contains a polyorganosiloxane component (A) which is curable through hydrosilylation.

9. 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;

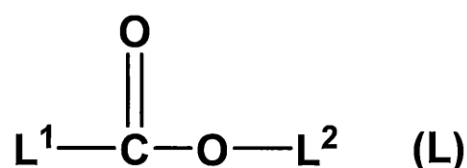
a third step of separating the semiconductor substrate and the adhesive layer from the support substrate; and

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

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.

10. A processed semiconductor substrate production method according to claim 9, wherein the solvent includes the organic solvent represented by formula (L) in an amount of 85 mass% or more.

11. A processed semiconductor substrate production method according to claim 10, wherein the solvent is formed of the organic solvent represented by formula (L).

12. A processed semiconductor substrate production method according to any one of claims 9 to 11, wherein L¹ is a methyl group.

13. A processed semiconductor substrate production

method according to claim 12, wherein L² is a butyl group or a pentyl group.

14. A processed semiconductor substrate production method according to any one of claims 9 to 13, wherein the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.

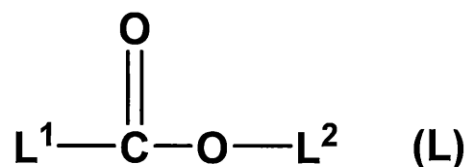
15. A processed semiconductor substrate production method according to claim 14, wherein the adhesive component (S) contains a siloxane adhesive.

16. A processed semiconductor substrate production method according to claim 15, wherein the siloxane adhesive contains a polyorganosiloxane component (A) which is curable through hydrosilylation.

17. 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, characterized in that

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.

18. A remover composition according to claim 17, wherein the solvent includes the organic solvent represented by formula (L) in an amount of 85 mass% or more.

19. A remover composition according to claim 18, wherein the solvent is formed of the organic solvent represented by formula (L).

20. A remover composition according to any one of claims 17 to 19, wherein L¹ is a methyl group.

21. A remover composition according to claim 20, wherein L² is a butyl group or a pentyl group.

22. A remover composition according to any one of claims 17 to 21, wherein the adhesive layer is a film formed by use of an adhesive composition which contains an adhesive component (S) containing at least one species selected from among a siloxane adhesive, an acrylic resin adhesive, an epoxy resin adhesive, a polyamide adhesive, a polystyrene adhesive, a polyimide adhesive, and a phenolic resin adhesive.

23. A remover composition according to claim 22, wherein the adhesive component (S) contains a siloxane adhesive.

24. A remover composition according to claim 23, wherein the siloxane adhesive contains a

polyorganosiloxane component (A) which is curable through hydrosilylation.