CLAIMS

1. An adhesive composition,

wherein the adhesive composition is applied to obtain an adhesive coating layer having a complex viscosity of 10 Pa·s or more and 10,000 Pa·s or less at 25°C or more and 100°C or less, and the adhesive coating layer has a viscosity reduction rate of 80% or less determined by the following formula (1):

Viscosity reduction rate (%) = $((V_{25} - V_{100})/V_{25}) \times 100$ ··· Formula (1)

wherein

V_{25}: Complex viscosity at 25°C, and

V_{100}: Complex viscosity at 100°C; and

wherein

the adhesive composition comprises:

a component (A) which includes a polyorganosiloxane (a1) having an alkenyl group bonded to a silicon atom and having 2 to 40 carbon atoms; and a polyorganosiloxane (a2) having a Si-H group; and

a platinum group metal-based catalyst (A2).

2. An adhesive composition being used for a manufacturing process of a laminate, the process including: a step in which the adhesive composition is applied to form an adhesive coating layer that becomes an adhesive layer; and a step in which a first substrate and a second substrate

are bonded to each other under heating and pressurization to be in contact with each other through the adhesive coating layer,

wherein the adhesive composition is applied to obtain an adhesive coating layer having a complex viscosity of 10 Pa·s or more and 10,000 Pa·s or less at 25°C or more and a temperature in the heating or less, and the adhesive coating layer has a viscosity reduction rate of 80% or less determined by the following formula (2):

Viscosity reduction rate (%) = $((V_{25} - V_T)/V_{25}) \times 100$ ··· Formula (2)

wherein

V_{25}: Complex viscosity at 25°C, and

V_T: Complex viscosity at a temperature in the heating; and

wherein

the adhesive composition comprises:

a component (A) which includes a polyorganosiloxane (a1) having an alkenyl group bonded to a silicon atom and having 2 to 40 carbon atoms; and a polyorganosiloxane (a2) having a Si-H group; and

a platinum group metal-based catalyst (A2).

3. The adhesive composition according to claim 1 or claim 2, wherein the component (A) is cured through hydrosilylation reaction.

4. The adhesive composition according to any one of claims 1 to 3, wherein at least one selected from the polyorganosiloxane (a1) having an alkenyl group bonded to a silicon atom and having 2 to 40 carbon atoms and the polyorganosiloxane (a2) having a Si-H group has a complex viscosity of 1,000 to 10,000 Pa·s.

5. The adhesive composition according to any one of claims 1 to 4, comprising a non-curable polyorganosiloxane as a component (B), which causes no curing reaction.

6. The adhesive composition according to claim 5, wherein the non-curable polyorganosiloxane has a complex viscosity of 1,000 to 10,000 Pa·s.

7. A laminate comprising: a first substrate; a second substrate; and an adhesive layer provided between the first substrate and the second substrate,

wherein the adhesive layer is formed from the adhesive composition according to any one of claims 1 to 6.

8. The laminate according to claim 7, further comprising a release layer provided between the first substrate and the second substrate.

9. The laminate according to claim 7 or 8, wherein the first substrate is a substrate having a semiconductor and the second substrate is a support substrate.

10. A method of manufacturing a laminate, the method comprising:

a step in which the adhesive composition according to any one of claims 1 to 6 is applied to form an adhesive coating layer that becomes an adhesive layer; and

a step in which a first substrate and a second substrate are bonded to each other under heating and pressurization to be in contact with each other through the adhesive coating layer.

11. The method of manufacturing a laminate according to claim 10, further comprising a step in which the adhesive coating layer is heated to form the adhesive layer, after the bonding step.

12. The method of manufacturing a laminate according to claim 10 or 11, comprising a step in which a release agent composition is applied to form a release agent coating layer that becomes a release layer,

wherein the bonding step is a step in which a first substrate and a second substrate are bonded to each other under heating and pressurization to be in contact with each other through the release agent coating layer and the adhesive coating layer.

13. The method of manufacturing a laminate according to any one of claims 10 to 12, wherein the first substrate is a substrate having a semiconductor and the second substrate is a support substrate.

14. A method of manufacturing a processed substrate, the method comprising:

a first step in which the first substrate of the laminate according to any one of claims 7 to 9 is processed; and

a second step in which the first substrate processed in the first step is separated from the second substrate.