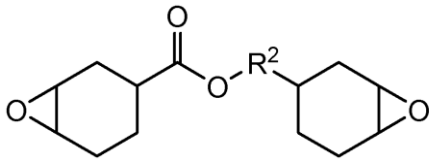
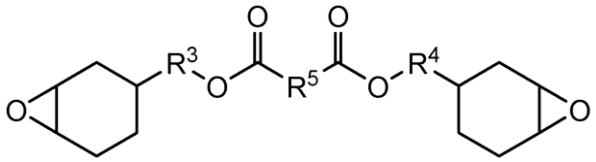
CLAIMS

1. An adhesive composition, comprising a thermosetting resin, a curing agent, and an elastomer,

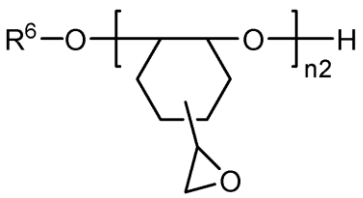
wherein the thermosetting resin includes an epoxy resin having an alicyclic ring~~-~~, and the epoxy resin having an alicyclic ring is at least one selected from the group consisting of an epoxy resin represented by the following general formula (2), an epoxy resin represented by the following general formula (3), and an epoxy resin represented by the following general formula (4),


(2)

wherein R^2 represents a divalent hydrocarbon group in the formula (2),


(3)

wherein R^3, R^4, and R^5 each independently represent a divalent hydrocarbon group in the formula (3),


(4)

wherein R^6 represents a hydrogen atom or a monovalent hydrocarbon group and n2 represents an integer from 1 to 10 in the formula (4).

2. The adhesive composition according to claim 1, wherein the curing agent includes a phenolic resin.

3. The adhesive composition according to claim 1 or 2, wherein the elastomer includes an acrylic resin.

4. The adhesive composition according to ~~any one of claims~~claim 1 ~~to 3~~or 2, wherein the thermosetting resin further includes an aromatic epoxy resin that does not have an alicyclic ring.

5. The adhesive composition according to claim 4, wherein the aromatic epoxy resin that does not have an alicyclic ring is a liquid at 25°C.

6. The adhesive composition according to ~~any one of claims~~claim 1 ~~to 5~~or 2, further comprising an inorganic filler.

7. The adhesive composition according to ~~any one of claims~~claim 1 ~~to 6~~or 2, further comprising a curing accelerator.

8. A film-form adhesive, obtained by forming the adhesive composition according to ~~any one of claims~~claim 1 ~~to 7~~or 2 into a film form.

9. An adhesive sheet, comprising:

a base material; and

the film-form adhesive according to claim 8 provided on the base material.

10. The adhesive sheet according to claim 9, wherein the base material is a dicing tape.

11. The adhesive sheet according to claim 9 ~~or 10~~, further comprising a protective film laminated on the surface of the film-form adhesive on the opposite side of the base material.

12. A method for producing a semiconductor device, the method comprising:

a wire bonding step of electrically connecting a first semiconductor element onto a substrate by means of a first wire;

a lamination step of sticking the film-form adhesive according to claim 8 on one side of a second semiconductor element; and

a die bonding step of subjecting the second semiconductor element having the film-form adhesive stuck thereto, to compression-bonding by means of the film-form adhesive, and thereby embedding at least a portion of the first wire in the film-form adhesive.