CLAIMS

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

wherein the curing agent comprises a phenolic resin having an alicyclic ring,

the content of the elastomer is 10 to 80 parts by mass with respect to 100 parts by mass of the thermosetting resin, and

the adhesive composition is a composition that is used in a semiconductor device, in which a first semiconductor element is connected by wire bonding onto a substrate by means of a first wire, and a second semiconductor element is also compression-bonded onto the first semiconductor element, in order to compression-bond the second semiconductor element and also to embed at least a portion of the first wire.

2. The adhesive composition according to claim 1, wherein the thermosetting resin is an epoxy resin.

3. The adhesive composition according to claim 2, wherein the epoxy resin comprises a bisphenol F type epoxy resin.

4. The adhesive composition according to any one of claims 1 to 3, wherein the elastomer is an acrylic resin.

5. The adhesive composition according to any one of claims 1 to 4, wherein the inorganic filler is silica.

6. The adhesive composition according to any one of claims 1 to 5, wherein the content of the inorganic filler is 25% by mass or more based on the total amount of the adhesive composition.

7. The adhesive composition according to any one of claims 1 to 6,

wherein the content of the sum of the thermosetting resin, the curing agent, the elastomer, and the inorganic filler is 95% by mass or more based on the total amount of the adhesive composition.

8. The adhesive composition according to any one of claims 1 to 7, further comprising a curing accelerator.

9. A film-form adhesive obtained by forming the adhesive composition according to any one of claims 1 to 8 into a film form.

10. An adhesive sheet comprising:

a base material; and

the film-form adhesive provided on the base material,

wherein the base material is a dicing tape, and

the film-form adhesive comprises a thermosetting resin, a curing agent, an elastomer, and an inorganic filler,

wherein the curing agent comprises a phenolic resin having an alicyclic ring, and

the content of the elastomer is 10 to 80 parts by mass with respect to 100 parts by mass of the thermosetting resin.

11. The adhesive sheet according to claim 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:

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

sticking the film-form adhesive according to claim 9 on one side of a second semiconductor element; and

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.

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