CLAIMS

1. A liquid resin composition which adheres a semiconductor element or a heat radiation member and contains a (meth)acrylic copolymer having at least a radical polymerizable functional group to a support,

wherein the (meth)acrylic copolymer having a radical polymerizable functional group contains alkyl (meth)acrylate as a constituent monomer having a linear or branched alkyl group having 6 to 9 carbon atoms in an amount of 10 wt% to 40 wt% of entire constituent monomers.

2. The liquid resin composition according to Claim 1,

wherein the radical polymerizable functional group of the (meth)acrylic copolymer is at least one selected from the group consisting of a (meth)acryloyl group, a (meth)allyl group, a vinyl group, and a maleimide group.

3. The liquid resin composition according to Claim 1 or 2,

wherein a functional group equivalent weight of the radical polymerizable functional group of the (meth)acrylic copolymer is 1500 to 2500.

4. The liquid resin composition according to any one of Claims 1 to 3,

wherein the alkyl (meth)acrylate which is a constituent monomer of the (meth)acrylic copolymer is n-hexyl (meth)acrylate, n-heptyl (meth)acrylate, n-octyl (meth)acrylate, n-nonyl (meth)acrylate, 2-methyloctyl (meth)acrylate, 2-ethylheptyl (meth)acrylate, 2-ethylhexyl (meth)acrylate, isooctyl (meth)acrylate, or isononyl (meth)acrylate.

5. The liquid resin composition according to any one of Claims 1 to 4, wherein the thermosetting adhesive composition contains at least one or more low-stress agents.

6. A semiconductor device which is produced using the liquid resin composition according to any one of Claims 1 to 5 as a die-attach material or a material for adhesion of a heat radiation member.

CLAIMS

The invention claimed is:

1. A liquid resin composition which adheres a semiconductor element or a heat radiation member and contains a (meth)acrylic copolymer having at least a radical polymerizable functional group to a support,

wherein the (meth)acrylic copolymer having a radical polymerizable functional group contains alkyl(meth)acrylate as a constituent monomer having a linear or branched alkyl group having 6 to 9 carbon atoms in an amount of from 10 wt % to 40 wt % of entire constituent monomers, and wherein a functional group equivalent weight of the radical polymerizable functional group of the (meth)acrylic copolymer is from 1500 to 2500.

2. The liquid resin composition according to claim 1,

wherein the radical polymerizable functional group of the (meth)acrylic copolymer is at least one selected from the group consisting of a (meth)acryloyl group, a (meth)allyl group, a vinyl group, and a maleimide group.

3. The liquid resin composition according to claim 1,

wherein the alkyl(meth)acrylate which is a constituent monomer of the (meth)acrylic copolymer is n-hexyl(meth)acrylate, n-heptyl(meth)acrylate, n-octyl(meth)acrylate, n-nonyl(meth)acrylate, 2-methyloctyl(meth)acrylate, 2-ethylheptyl(meth)acrylate, 2-ethylhexyl(meth)acrylate, isooctyl(meth)acrylate, or isononyl(meth)acrylate.

4. The liquid resin composition according to claim 1,

wherein the thermosetting adhesive composition contains at least one or more low-stress agents.

5. A semiconductor device which is produced using the liquid resin composition according to claim 1 as a die-attach material or a material for adhesion of a heat radiation member.