CLAIMS

1. Copper paste for joining, comprising:

metal particles; and

a dispersion medium,

wherein the metal particles include sub-micro copper particles having a volume-average particle size of 0.12 μm to 0.8 μm, and flake-shaped micro copper particles having a maximum particle size of 1 μm to 20 μm, and an aspect ratio of 4 or greater, and

the amount of the micro copper particles contained, which are included in the metal particles and have a maximum particle size of 1 μm to 20 μm and an aspect ratio of less than 2, is 50% by mass or less on the basis of a total amount of the flake-shaped micro copper particles.

2. The copper paste for joining according to claim 1,

wherein the copper paste for joining is used without pressurization.

3. The copper paste for joining according to claim 1 or 2,

wherein the amount of the sub-micro copper particles contained is 20% by mass to 90% by mass on the basis of a sum of a mass of the sub-micro copper particles and a mass of the flake-shaped micro copper particles, and

the amount of the flake-shaped micro copper particles contained is 1% by mass to 90% by mass on the basis of a total mass of the metal particles.

4. The copper paste for joining according to any one of claims 1 to 3,

wherein the metal particles include at least one kind of metal particles selected from the group consisting of nickel, silver, gold, palladium, and platinum.

5. A method for manufacturing a joined body, comprising:

a process of preparing a laminated body in which a first member, and the copper paste for joining according to any one of claims 1 to 4 and a second member that are disposed on a side whereon a weight of the first member acts, are laminated in this order; and sintering the copper paste for joining in a state of receiving the weight of the first member, or the weight of the first member and a pressure of 0.01 MPa or lower.

6. A method for manufacturing a semiconductor device, comprising:

a process of preparing a laminated body in which a first member, and the copper paste for joining according to any one of claims 1 to 4 and a second member that are disposed on a side whereon a weight of the first member acts, are laminated in this order; and sintering the copper paste for joining in a state of receiving the weight of the first member, or the weight of the first member and a pressure of 0.01 MPa or lower,

wherein at least one of the first member and the second member is a semiconductor element.

7. A joined body, comprising:

a first member;

a second member; and

a sintered body of the copper paste for joining according to any

one of claims 1 to 4, the sintered body joining the first member and the second member.

8. The joined body according to claim 7,

wherein at least one of the first member and the second member includes at least one kind of metal selected from the group consisting of copper, nickel, silver, gold, and palladium on a surface that is in contact with the sintered body.

9. A semiconductor device, comprising:

a first member;

a second member; and

a sintered body of the copper paste for joining according to any one of claims 1 to 4, the sintered body joining the first member and the second member,

wherein at least one of the first member and the second member is a semiconductor element.