Patent Literature 2: Japanese Patent Laid-Open No. 2018-181558
Patent Literature 3: Japanese Patent Laid-Open No. 2012-167337
Patent Literature 4: Japanese Patent Laid-Open No. 2012-248370
Patent Literature 5: Japanese Patent Laid-Open No. 2020-033610

Summary

Technical Problem

[0005] However, a cured product obtained by curing any of the compositions as disclosed in Patent Literatures 1 to 5 is not satisfactory in terms of volume resistance value that is required for materials in the electronic material field in recent years.

[0006] Thus, the present disclosure intends to provide a composition that makes it possible to produce a cured product having a low volume resistance value. Further, the present disclosure intends to provide a method for producing a cured product using the composition and a cured product obtained by curing the composition.

Solution to Problem

[0007] The present inventors have conducted diligent studies in order to obtain the above-described composition to find that use of a composition containing particular components makes it possible to produce a cured product having a low volume resistance value, and completed the present disclosure.

[0008] That is, the present disclosure provides a composition comprising a component (A): at least metal particles selected from the group consisting of copper particles and silver particles, a component (B): at least one cashew component selected from the group consisting of cashew oils and cashew oil-modified resins, and a component

(C): a curing agent.

[0008a] The present disclosure provides, in one aspect, a composition comprising a component (A): metal particles consisting of copper particles, a component (B): at least one cashew component selected from the group consisting of cashew oils and cashew oil-modified resins, and a component (C): a curing agent, wherein the curing agent is a latent curing agent, and a content of the component (A) is in a range from 50 to 99 parts by mass based on 100 parts by mass of a total amount of the composition.

[0009] The present disclosure further provides, in another aspect, a method for producing a cured product, the method comprising: a coating step of coating a substrate with the above-described composition; and a curing step of heating the substrate coated with the composition to cure the composition.

[0010] The present disclosure further provides, in another aspect, a cured product obtained by curing the above-described composition.

Advantageous Effects

[0011] The present disclosure can provide a composition that makes it possible to produce a cured product having a low volume resistance value. Further, the present disclosure can provide a method for producing a cured product using the composition, and a cured product obtained by curing the composition.

Description of Embodiments

[0012] Hereinafter, embodiments of the present invention will be described in detail. A composition of one embodiment of the present invention (hereinafter, also simply referred to as "composition") is a composition containing, as essential components, a component (A): at least metal particles selected from the group consisting of copper particles and silver particles (hereinafter, also simply referred to as "component (A)"), a component (B): at least one cashew component selected from the group consisting of cashew oils and cashew oil-modified resins (hereinafter, also simply referred to as "component (B)"), and a component (C): a curing agent (hereinafter, also simply referred to as "component (C)").

[0013] The component (A) contains at least metal particles selected from the group consisting of copper particles and silver particles. The types of the copper particles and the silver particles are not particularly limited, and generally known copper particles and silver

CLAIMS

[1] A composition comprising

a component (A): metal particles consisting of copper particles,

a component (B): at least one cashew component selected from the group consisting of cashew oils and cashew oil-modified resins, and

a component (C): a curing agent,

wherein the curing agent is a latent curing agent, and

a content of the component (A) is in a range from 50 to 99 parts by mass based on 100 parts by mass of a total amount of the composition.

[2] The composition according to claim 1, wherein the content of the component (B) is 0.1 to 15 parts by mass, and the content of the component (C) is 0.1 to 5 parts by mass, based on 100 parts by mass of the total amount of the composition.

[3] The composition according to claim 1, further comprising a component (D): at least one resin selected from the group consisting of xylene resins, phenolic resins, and epoxy resins, excluding the component (B).

[4] The composition according to claim 3, wherein the content of the component (D) is 30 parts by mass or less based on 100 parts by mass of the total amount of the composition.

[5] The composition according to claim 1, further comprising a component (E): a solvent.

[6] The composition according to claim 5, wherein the content of the component (E) is 20 parts by mass or less based on 100 parts by mass of the total amount of the composition.

[7] The composition according to claim 1, wherein the component (A) consists of copper particles surface-treated with a fatty acid.

[8] A method for producing a cured product, the method

comprising:

a coating step of coating a substrate with the composition according to any one of claims 1 to 7; and

a curing step of heating the substrate coated with the composition to cure the composition.

[9] The method for producing a cured product according to claim 8, wherein the substrate coated with the composition is heated at 50 to 250°C for 1 to 200 minutes.

[10] A cured product obtained by curing the composition according to any one of claims 1 to 7.