CLAIMS

1. An adhesive composition for forming an adhesive layer to be in contact with a resin on a surface of a metal, comprising:

a low molecular weight organic compound having two or more nitrogen atoms in one molecule, wherein the low molecular weight organic compound is a compound having at least one of an aromatic ring and a nitrogen-containing heterocyclic ring; and

at least one metal ion selected from the group consisting of a trivalent aluminum ion and a trivalent chromium ion,

wherein the resin is a curable resin, and the adhesive composition is an aqueous solution having a pH of 12 or less and has a concentration of the low molecular weight organic compound of 0.01 to 150 g/L and a molar concentration of the at least one metal ion of 0.005 to 100 mmol/L.

2. A method for producing a surface-treated metal member, comprising the step of:

bringing a member having a surface of a metal into contact with the adhesive composition according to claim 1 to form an adhesive layer on the surface.

3. A method for producing a metal-resin composite body, comprising the step of:

bonding a resin member onto an adhesive layer of a surface-treated metal member obtained by the method for producing a surface-treated metal member according to claim 2.