[Composition]

A composition according to one embodiment comprises a quaternary alkylammonium fluoride or a hydrate of a quaternary alkylammonium fluoride; and as an aprotic solvent, (A) an N-substituted amide compound having no active hydrogen on a nitrogen atom, and (B) dipropylene glycol dimethyl ether (DPGDME).

[0019]

<Quaternary alkylammonium fluoride or hydrate thereof>

The quaternary alkylammonium fluoride or a hydrate thereof releases a fluoride ion which is involved in cleavage of an Si-O bond. A quaternary alkylammonium moiety can allow the quaternary alkylammonium fluoride, which is a salt, to dissolve in an aprotic solvent. As the quaternary alkylammonium fluoride, various compounds can be used without any particular limitation. Examples of the hydrate of the quaternary alkylammonium fluoride include trihydrates, tetrahydrates, and pentahydrates. The quaternary alkylammonium fluoride may be one or a combination of two or more thereof.

[0020]

In one embodiment, the quaternary alkylammonium fluoride is a tetraalkylammonium fluoride represented by $R^2R^3R^4R^5N^+F^-$, wherein R^2 to R^5 are each independently an alkyl group selected from the group consisting of a methyl group, an ethyl group, an n-propyl group, an isopropyl group, and an n-butyl group. Examples of such a quaternary alkylammonium fluoride include tetramethylammonium fluoride, tetraethylammonium fluoride, tetrapropylammonium fluoride, and tetrabutylammonium fluoride. From the viewpoint of decomposing cleaning performance, availability, prices, etc., it is preferable that the quaternary alkylammonium fluoride be tetrabutylammonium fluoride (TBAF).

[0021]

The content of the quaternary alkylammonium fluoride in the composition is preferably 0.01 to 10% by mass. The “content of the quaternary alkylammonium fluoride” is a value converted as a mass of only the quaternary alkylammonium fluoride, excluding the mass of hydrate water, when a hydrate of the quaternary alkylammonium fluoride is contained in the composition. The content of the quaternary alkylammonium fluoride in the composition is more preferably 1 to 10% by mass, still more preferably 3 to 7% by mass, and particularly preferably 4 to 6% by mass. By setting the content of the quaternary alkylammonium fluoride to 0.01% by mass or more, an adhesive polymer can be effectively decomposed and cleaned, and by setting the content to 10% by mass or less, corrosion of a metal portion included in a device forming surface of a device wafer can be prevented or suppressed.

[0022]

<Aprotic solvent>