likely to occur during drying, thereby improving the smoothness.

[0034]

As specific examples of the resin containing the reactive functional group, which has a long-chain alkyl group in the resin skeleton, an alkyd resin, a (meth)acrylic resin and the like, each of which has a long-chain alkyl group as a side chain, can be exemplified. As the long-chain alkyl group to be used, a straight-chain alkyl group having a carbon number of 6 to 20 is suitable. It is preferable to have the above-described number of carbons, because surface free energy of the resin to be obtained can be decreased, and the compatibility with the silicone-based release agent can be improved.

[0035]

In the case of the alkyd resin having the long-chain alkyl group as the side chain, it can be obtained by mixing the acid having the long-chain alkyl group (for example, octylic acid, stearic acid or the like) into polybasic acid such as phthalic acid, and mixing them with a polyhydric alcohol component (pentaerythritol, diethylene glycol or the like) so as to cause a dehydration condensation reaction.

[0036]

The (meth)acrylic resin having the long-chain alkyl

application can be improved. The viscosity of the coating liquid is preferably 1 mPa·s or more and 100 mPa·s or less in terms of the coating outer appearance, and is more preferably 2 mPa·s or more and 10 mPa·s or less. The solid content concentration, the organic solvent and the like are preferably adjusted so that the viscosity may be within this range.

[0071]

In the present invention, the coating liquid for forming the release layer is preferably filtrated before the application. A filtration method is not limited particularly, and known methods can be adopted, but surface-type, depth-type and adsorption-type cartridge filters are preferably used. The use of a cartridge-type filter is preferable, because such a filter can be used while sending the coating liquid continuously from a tank to a coating part, and thus can filtrate the coating liquid efficiently with high productivity. As filtration accuracy of the filter, a filter which can remove substances in a size of 1 μm by 99% or more is preferably used, and a filter which can filtrate substances in a size of 0.5 μm by 99% or more is further preferably used. By using a filter with the above-described filtration accuracy, foreign substances mixed into the release agent can be removed, and foreign substances attached to the release layer of the release film for forming a ceramic green sheet of the present invention can be reduced significantly. Thus, defects of a ceramic green

sheet formed by using the release film of the present invention can also be reduced, whereby a defect ratio of a ceramic capacitor can be lowered as well.

[0072]

As a method for applying the coating liquid, known arbitrary coating methods can be adopted, and conventionally known methods, for example, roll coating such as gravure coating and reverse coating, bar coating such as a wire bar, die coating, spray coating, air knife coating and the like can be used.

[0073]

A film thickness (wet amount) of the coating liquid during the application is preferably 1 g/m^2 or more and 10 g/m^2 or less. The film thickness of 1 g/m^2 or more is preferable, because the application can be stable, and defects such as cissing and stripes are not likely to be generated. Further, the film thickness of 10 g/m^2 or less is preferable, because the coating liquid can be dried quickly, and the components contained in the release layer are not likely to be aggregated.

[0074]

(Drying process)

during the peeling was measured, and was denoted as peel force.

[0098]

(Peeling stability evaluation of ceramic green sheet)

Similarly to the above-described peelability evaluation of the ceramic green sheet, evaluation on peelability was carried out ten times. Variation of ten values of peeling force was evaluated according to following criteria for the evaluation of the peeling stability.

○: A difference between a maximum value and a minimum value of the ten measurement values was less than 0.5 mN/mm^2.

·: The difference between the maximum value and the minimum value of the ten measurement values was 0.5 mN/mm^2 or more and less than 1.0 mN/mm^2.

×: The difference between the maximum value and the minimum value of the ten measurement values was not less than 1.0 mN/mm^2.

[0099]

(Curl evaluation of release film)

The release film sample was cut into a size of 10 cm × 10 cm, and was treated by heat at 100°C for 15 minutes in a heat air oven so that tension might not be applied to the release film. Thereafter, the release film sample was

green sheet was formed similarly to Example 1 except for replacing the coating liquid 1 with coating liquid 11, in which the resin solution A in the coating liquid 1 was replaced with 6AN-5000 (acrylic resin that does not contain a long-chain alkyl group).

(Coating Liquid 11)

Methylethylketone	57.93 Parts by Mass
Toluene	40.00 Parts by Mass
6AN-5000	1.75 Parts by Mass
(Acrylic Polyol, Manufactured by TAISEI FINE CHEMICAL CO., LTD., Solid Content of 40%)	
Crosslinking Agent	0.25 Parts by Mass
(Hexamethoxy Methylol Melamine, Solid Content of 100%)	
Silicone-Based Release Agent	0.05 Parts by Mass
(Polyether-Modified Polydimethylsiloxane, TSF4446, Solid Content of 100%, Manufactured by Momentive Performance Materials Inc.)	
Acid Catalyst (p-Toluenesulfonic Acid)	0.02 Parts by Mass

[0116]

(Example 12)

A release film for producing an ultrathin ceramic green sheet was formed similarly to Example 1 except for replacing the coating liquid 1 with coating liquid 12.