excellent releasability of a ceramic green sheet.

[Means for solving the Problems]

[0009]

To achieve the above object, first, the present invention provides a release film for a ceramic green sheet production process, the release film being characterized by comprising a base material and a release agent layer provided at one side of the base material, wherein: the release agent layer comprises a cured material of a release agent composition that contains an active energy ray curable component and a silicone-based component; a surface of the release agent layer at an opposite side to the base material has an arithmetic average roughness (Ra) of 8 nm or less and a maximum projection height (Rp) of 50 nm or less; an elastic modulus measured by a nanoindentation test of the release agent layer is 4.0 GPa or more; and a surface of the base material at an opposite side to the release agent layer has an arithmetic average roughness (Ra) of 5 to 50 nm and a maximum projection height (Rp) of 30 to 500 nm (Invention 1).

[0009a] In one aspect, there is provided a release film for a ceramic green sheet production process, the release film comprising a base material and a release agent layer provided at one side of the base material, wherein:

the release agent layer comprises a cured material of a release agent composition that contains (meth)acrylic ester and a silicone-based component;

a surface of the release agent layer at an opposite side to the base material has an arithmetic average roughness (Ra) of 8 nm or less and a maximum projection height (Rp) of 50 nm or less;

an elastic modulus measured by a nanoindentation test of the release agent layer is 4.0 GPa or more; and

a surface of the base material at an opposite side to the release agent layer has an arithmetic average roughness

(Ra) of 5 to 50 nm and a maximum projection height (Rp) of 30 to 500 nm.

[0010]

According to the above invention (Invention 1), the surface of the release agent layer is highly smooth mainly due to the cured material of the active energy ray curable component. Therefore, it is possible to effectively prevent/suppress the occurrence of defects such as pinholes and thickness irregularity in a ceramic green sheet. In addition, due to that the release agent layer contains the silicone-based component or its cured material and that the elastic modulus of the release agent layer is defined as above, a ceramic green sheet can be released in a normal way from the release film for a ceramic green sheet production process. Furthermore, due to that the rear

[Name of Document] Claims

[Claim 1]

A release film for a ceramic green sheet production process, the release film comprising a base material and a release agent layer provided at one side of the base material, wherein:

the release agent layer comprises a cured material of a release agent composition that contains ~~an active energy ray curable component~~(meth)acrylic ester and a silicone-based component;

a surface of the release agent layer at an opposite side to the base material has an arithmetic average roughness (Ra) of 8 nm or less and a maximum projection height (Rp) of 50 nm or less;

an elastic modulus measured by a nanoindentation test of the release agent layer is 4.0 GPa or more; and

a surface of the base material at an opposite side to the release agent layer has an arithmetic average roughness (Ra) of 5 to 50 nm and a maximum projection height (Rp) of 30 to 500 nm.

[Claim 2]

The release film for a ceramic green sheet production process as recited in claim 1, wherein a mass fraction of the silicone-based component in the release agent composition to a total mass of the ~~active energy ray curable component~~(meth)acrylic ester and the silicone-based component is 0.7 to 5 mass%.

[Claim 3]

The release film for a ceramic green sheet production process as recited in claim 1 or 2, wherein the silicone-based component comprises polyorganosiloxane having a reactive functional group.

~~[Claim 4]~~

~~The release film for a ceramic green sheet production~~

~~process as recited in any one of claims 1 to 3, wherein the active energy ray curable component comprises (meth)acrylic ester.~~

[Claim ~~5~~4]

The release film for a ceramic green sheet production process as recited in any one of claims ~~4~~1 to 3, wherein the (meth)acrylic ester comprises (meth)acrylic ester that has a trifunctional or more functional (meth)acryloyl group.

[Claim ~~6~~5]

The release film for a ceramic green sheet production process as recited in any one of claims 1 to ~~5~~4, wherein the release agent layer has a thickness of 0.3 to 2 μm.