irregularity may readily occur in the ceramic green sheet when the ceramic slurry is coated and dried. In addition, when the molded ceramic green sheet is released from the release film, troubles may readily occur such as breakage of the ceramic green sheet due to reduction in its strength.

[0005]

To solve the former problem, Patent Literature 1 proposes to use a carrier film (release film) having a surface to which ceramic slurry is applied and of which a maximum height Rmax as defined by JIS B0601 is 0.2 μm or less.

[Prior Art Literature]

[Patent Literature]

[0006]

[Patent Literature 1] JP2003-203822A

[Summary ~~of the Invention~~]

In a first aspect of the present disclosure, 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, and

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.

[Problems to be solved by the Invention]

[0007]

However, even when a release film having a defined maximum height Rmax as in Patent Literature 1 is used, it may not be possible to effectively prevent the occurrence

of defects such as pinholes and thickness irregularity in a ceramic green sheet having a reduced thickness. In addition, when a ceramic green sheet having a reduced thickness is released from the release film, troubles such as breakage of the ceramic green sheet may still occur.

[0008]

The present invention has been made in consideration of such actual circumstances, and an object of the present invention is to provide a release film for a ceramic green sheet production process which can prevent/suppress the occurrence of defects such as pinholes and thickness irregularity in a ceramic green sheet and which has

[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, and

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.

[Claim 2]

The release film for a ceramic green sheet production process as recited in claim 1, wherein an area occupation ratio of coarse protrusions is 10% or less, wherein the coarse protrusions have a projection height of 10 nm or more at the surface of the release agent layer at the opposite side to the base material.

[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 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 5]~~

~~The release film for a ceramic green sheet production process as recited in any one of claims 1 to 4, wherein the active energy ray curable component comprises (meth)acrylic ester.~~

[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 (meth)acrylic ester comprises trifunctional or more functional (meth)acrylic ester.

[Claim ~~7~~6]

The release film for a ceramic green sheet production process as recited in any one of claims 1 to ~~6~~5, wherein the release agent layer has a thickness of 0.3 to 2 μm.