Also proposed is improvement of the ink repellency by incorporating a silicone oil in the silicone rubber (see, for example, Patent Document 2).

Prior Art Documents

Patent Document

[0007]

Patent Document 1: Japanese Unexamined Patent Publication (Kokai) No. 2007-219358

Patent Document 2: Japanese Unexamined Patent Publication (Kokai) No. 2001-232959

Summary

Problems to Be Solved

[0008]

However, the method of controlling the initial elastic modulus of the silicone rubber as disclosed in the Patent Document 1 still required reduction of the silicone rubber thickness, and accordingly, this method failed to realize the practically acceptable scratch resistance, printing durability, and ink repellency.

[0009]

In the meanwhile, improvement of the scratch resistance has been enabled by the method wherein a silicone oil is introduced in the silicone rubber as disclosed in the Patent Document 2 since reduction in the thickness of the silicone rubber is no longer needed. However, the printing durability was often insufficient.

[0010]

In view of the situation as described above, there has been a demand for a printing plate which is capable of realizing a high definition image as well as high ink repellency and printing durability without reducing the thickness.

[0011]

Accordingly, the present disclosure provides a precursor for lithographic printing having excellent printing durability and ink repellency as well as high reproducibility of high definition images.

Means for Solving the Problems

[0012]

The precursor for lithographic printing of the present disclosure has the following constitution, namely, a precursor for lithographic printing comprising at least a heat sensitive layer and an ink repellent layer wherein the ink repellent layer has an elastic modulus of the plate surface under the surface load of 14000 N/m^2 of at least 25 MPa and up to 35 MPa.

[0012a]

In an aspect, there is provided a precursor for lithographic printing comprising at least a heat sensitive layer and an ink repellent layer wherein the ink repellent layer has an elastic modulus of the plate surface under the surface load of 14000 N/m^2 of at least 25 MPa and up to 35 MPa.

[0012b]

In another aspect, there is provided a lithographic printing plate produced by the steps of exposing the precursor for lithographic printing as defined above according to image, and developing the exposed precursor and removing the ink repellent layer.

[0012c]

In another aspect, there is provided a method for producing a lithographic printing plate comprising the steps of exposing the precursor for lithographic printing as defined above according to image, and developing the exposed precursor and removing the ink repellent layer.

[0012d]

In another aspect, there is provided a method for producing a printed material comprising the steps of allowing an ink to adhere to the surface of the lithographic printing plate as defined above, and transferring the ink to the printing substrate either directly or via a blanket.

Advantageous Effects

[0013]

The present disclosure provides a precursor for lithographic printing having excellent printing durability and ink repellency as well as high reproducibility of the high definition images.

Description of Preferred Embodiments

[0014]

The present invention provides a precursor for lithographic printing having excellent reproducibility of high definition images as well as high printing durability and ink repellency by considering the relation of the elastic modulus of the plate surface and the surface roughness with the high precision reproducibility, the relation of the elastic modulus of the plate surface (proportion of the crosslinking agent) with the printing durability, and the relation of the ink repellency and the proportion of the crosslinking agent. The precursor for lithographic printing of the present invention may be used in both the waterless printing and the wet printing, and its use is more suitable for the waterless printing.

[0015]

Next, the precursor for lithographic printing of the present invention is described.

The precursor for lithographic printing of the present invention is a precursor for lithographic printing comprising at least a heat sensitive layer and an ink repellent layer wherein the ink repellent layer has an elastic modulus of the plate surface under the surface load of 14000 N/m^2 of at least