perfluoroelastomer (FFKM) is used because a sealing material excellent in plasma resistance (radical resistance) can be obtained.

For example, Patent Literature 1 discloses an uncrosslinked rubber composition used for the production of a sealing material, the uncrosslinked rubber composition including a hydrogen-containing fluororubber that is a crosslinkable fluoroelastomer and a liquid hydrogen site protecting agent.

Citation List

Patent Literature

[0004]

Patent Literature 1: JP 2019-52226 A

Summary

[0005]

For the conventional uncrosslinked rubber composition such as the composition described in Patent Literature 1, a liquid or oily compound having a perfluoro skeleton (hydrogen site protecting agent in Patent Literature 1) has been used for the purpose of obtaining a sealing material excellent in plasma resistance (radical resistance).

In order to form a molded body such as a sealing

material exhibiting desired physical properties from such an uncrosslinked rubber composition, each component in the composition needs to be uniformly mixed. However, it has been found that the crosslinkable fluoroelastomer is difficult to be mixed with the liquid or oily compound having a perfluoro skeleton, the amount of the liquid or oily compound having a perfluoro skeleton that can be used relative to the crosslinkable fluoroelastomer is limited, and it is not easy to form a uniform composition with the crosslinkable fluoroelastomer and the liquid or oily compound having a perfluoro skeleton.

[0006]

An example of the present disclosure provides an elastomer composition including a crosslinkable fluoroelastomer and a compound having a perfluoro skeleton, which is easily obtained as a uniform composition.

Solution to Problem

[0007]

An example of the configuration of the present disclosure is as follows.

[0008]

[1] An elastomer composition including a crosslinkable fluoroelastomer (A) and

to 9000 Pa·s at 23°C, which is measured using a cone-plate viscometer in accordance with the method for measuring a viscosity of a liquid specified in JIS Z 8803:2011

Step 2: A step of mixing a crosslinkable fluoroelastomer (A) with the compound (B) having a perfluoro skeleton obtained in the step 1

[0012]

[5] The method for producing an elastomer composition according to [4], in which the amount of the compound (B) having a perfluoro skeleton used in the step 2 is 5 parts by mass or more based on 100 parts by mass of the crosslinkable fluoroelastomer (A).

[0013]

[6] A sealing material obtained from the elastomer composition according to any one of [1] to [3].

[0014]

[7] A method for producing a sealing material, the method including:

a step of crosslinking the elastomer composition according to any one of [1] to [3].

[0014a]

In an aspect of the present disclosure, there is provided an elastomer composition comprising:

a crosslinkable fluoroelastomer (A); and

a compound (B) having a perfluoro skeleton, the compound having a viscosity of 1000 to 9000 Pa·s at 23°C, which is measured using a cone-plate viscometer in accordance with the method for measuring a viscosity of a liquid specified in JIS Z 8803:2011.

[0014b]

In another aspect of the present disclosure, there is provided a method for producing an elastomer composition, the method comprising the following steps 1 and 2:

step 1: a step of causing a reaction between a compound with a perfluoro skeleton having an ethylenically unsaturated bond and a reactive organosilicon compound having a hydrosilyl group to synthesize a compound (B) having a perfluoro skeleton, the compound having a viscosity of 1000 to 9000 Pa·s at 23°C, which is measured using a cone-plate viscometer in accordance with the method for measuring a viscosity of a liquid specified in JIS Z 8803:2011; and

step 2: a step of mixing a crosslinkable fluoroelastomer (A) with the compound (B) having a perfluoro skeleton obtained in the step 1.

[0014c]

In a further aspect of the present disclosure, there is provided a sealing material obtained from the elastomer composition as disclosed herein.

[0014d]

In another aspect of the present disclosure, there is provided a method for producing a sealing material, the method comprising:

a step of crosslinking the elastomer composition as disclosed herein.

Advantageous Effects of Invention

[0015]

According to an embodiment of the present invention,