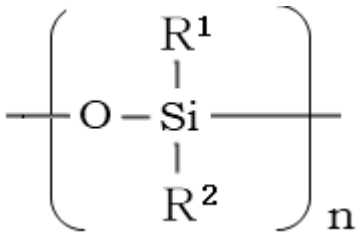
CLAIMS

[Claim 1] A sealing material composition with plasma resistance for use in semiconductor manufacturing equipment comprising a silicone polymer and a vulcanizing agent,

the silicone polymer containing a polysiloxane-based compound having an unsubstituted or substituted aromatic monovalent hydrocarbon group in a side chain.

[Claim 2] The sealing material composition according to claim 1, wherein the polysiloxane-based compound contains a constituent unit represented by the following formula (1):

[Chem. 1]



(1)

wherein

R^1 independently represents an unsubstituted or substituted aromatic monovalent hydrocarbon group;

R^2 independently represents an unsubstituted or substituted aromatic monovalent hydrocarbon group, an unsubstituted or substituted unsaturated or saturated hydrocarbon group not containing an aromatic hydrocarbon group, an alkoxy group, a hydroxy group, or a hydrogen atom; and

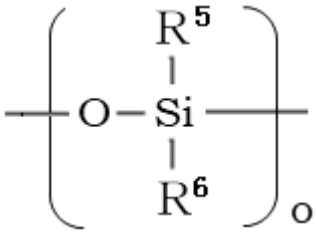
n represents an integer of 1 to 7000.

[Claim 3] The sealing material composition according to claim 2, wherein a ratio of the constituent unit represented by the formula (1) in the polysiloxane-based compound is 1 to 70 mol%.

[Claim 4] The sealing material composition according to any one of claims 1-3, wherein the polysiloxane-based compound has a group represented by $(R^3)_3Si\text{-}R^4\text{-}$ at a main chain end, wherein each R^3 independently represents an unsubstituted or substituted aromatic monovalent hydrocarbon group, an unsubstituted or substituted unsaturated or saturated hydrocarbon group not containing an aromatic hydrocarbon group, an alkoxy group, or a hydroxy group; and R^4 independently represents an oxygen atom or an alkylene group having 1 to 5 carbon atoms.

[Claim 5] The sealing material composition according to any one of claims 1-4, wherein the polysiloxane-based compound contains a constituent unit represented by the following formula (2):

[Chem. 2]



(2)

wherein

R^5 and R^6 independently represent an unsubstituted or substituted unsaturated or saturated hydrocarbon group not containing an aromatic hydrocarbon group, an alkoxy group, or a hydroxy group; and

o represents an integer of 100 to 10000.

[Claim 6] The sealing material composition according to any one of claims 1-5, wherein the polysiloxane-based compound has a vinyl group in at least one of a side chain and a main chain end.

[Claim 7] The sealing material composition according to any one of claims 1-

6, further comprising at least one of 1 to 160 parts by mass of a filler and 0.05 to 3 parts by mass of a pigment based on 100 parts by mass of the silicone polymer.

[Claim 8] The sealing material composition according to any one of claims 1-7, wherein the vulcanizing agent contains a peroxide-based compound.

[Claim 9] The sealing material composition according to any one of claims 1-8, wherein a content of the vulcanizing agent is 0.2 to 8 parts by mass based on 100 parts by mass of the silicone polymer.

[Claim 10] The sealing material composition according to any one of claims 1-9, further comprising a perfluoropolyether-based compound.

[Claim 11] The sealing material composition according to any one of claims 1-10, wherein a metal ion content is 1000 ppm or less.

[Claim 12] A sealing material comprising a crosslinked product of the sealing material composition according to any one of claims 1-11.

[Claim 13] A gate seal for semiconductor manufacturing equipment comprising the sealing material according to claim 12.

[Claim 14] Semiconductor manufacturing equipment comprising the sealing material according to claim 12.