Claims

1. A silicone hydrogel soft contact lens obtained by rendering the silicone hydrogel soft contact lens precursor in the form of the silicone-containing copolymer molded article and having a contact lens shape a hydrated state with physiological saline or a preservation solution for soft contact lens, wherein the silicone-containing copolymer molded article is comprised of at least one monomer unit selected from the group consisting of (a1) and (a2), a monomer unit (b), and at least one monomer unit selected from the group consisting of (c1) to (c3) below, and optionally monomer units not containing silicon atoms in the molecular structure thereof, wherein the monomer units not containing silicon atoms in the molecular structure thereof are one or more monomers selected from among 2-hydroxyethyl (meth)acrylate, methacrylic acid, methyl (meth)acrylate, ethyl (meth)acrylate, n-butyl (meth)acrylate, 2-methoxyethyl (meth)acrylate, and 2-methacryloyloxyethyl phosphorylcholine); having a hydrophilic surface with a contact angle relative to pure water of 60°, wherein the contact angle is the contact angle of a silicone hydrogel molded article obtained by hydrating a silicone-containing copolymer molded article; wherein the content of silicone monomers (a1) and (a2) units is in a range of 20 to 56 mass%, the content of monomer (b) units is in a range of 40 to 60 mass%, and the content of monomers (c1) to (c3) units is in a range of 0.02 to 4 mass%, and the content of the monomer units not containing silicon atoms in the molecular structure thereof is in a range of less than 10 mass%:

(a1) one or two or more units derived from silicone monomers containing at least one hydroxyl group and 1 to 4 silicon atoms per molecule, and having a molecular weight of less than 900;

(a2) one or two or more silicone monomer units containing at least one polyethylene glycol group and 1 to 4 silicon atoms per molecule, and having a molecular weight of less than 900;

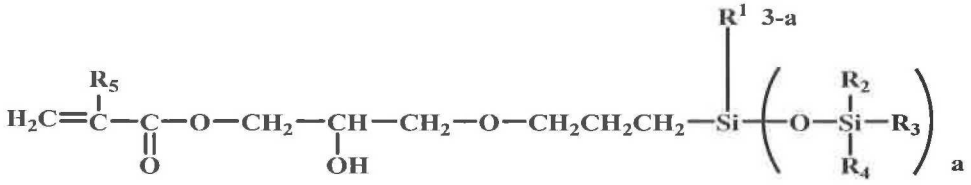
(b) one or two or more units derived from hydrophilic monomers having a vinyl group;

(c1) one or two or more monomer units containing two or more vinyl groups per molecule;

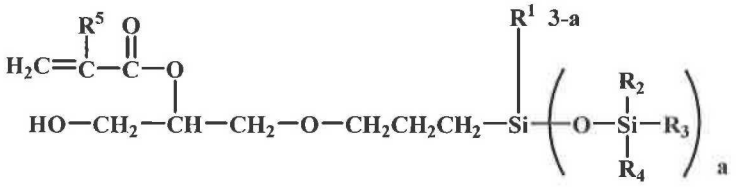
(c2) one or two or more monomer units containing two or more allyl groups per molecule; and

(c3) one or two or more monomers having two or more (meth)acrylate groups per molecule.

2. The soft contact lens according to claim 1, wherein silicone monomer (a1) is a monomer denoted by general formula (a1-1) or (a1-2):

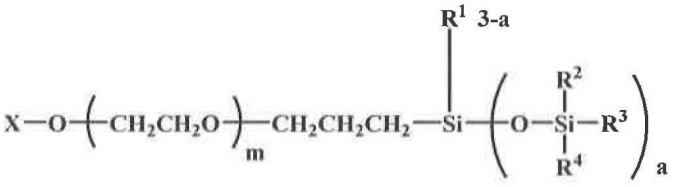


(a1-1)



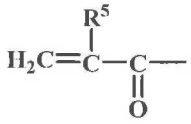
(a1-2)

wherein R^1, R^2, R^3, and R^4 denotes methyl groups, R^5 denotes a hydrogen atom or methyl group, and *a* denotes an integer of 1 to 3 and silicone monomer (a2) is a monomer denoted by general formula (a2-1) below:

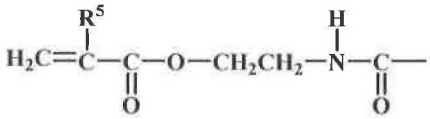


(a2-1)

wherein R^1, R^2, R^3, and R^4 denote methyl groups, *a* denotes an integer of from 1 to 3, m denotes 4 to 8, the X in the equation denotes a substituent selected from the substituents denoted by formulas (Y1) and (Y2) below (wherein R^5 denotes a hydrogen atom or a methyl group)):



(Y1)



(Y2).

3. The soft contact lens according to claim 1 or 2, wherein hydrophilic monomer (b) is either N-vinyl-2-pyrrolidone or N-vinyl-N-methyl acetamide, or both.

4. The soft contact lens according to any one of claims 1 to 3, wherein monomer (c1) is one or two or more selected from among 1,4-butanediol divinyl ether, diethylene glycol divinyl ether, and triethylene glycol divinyl ether;

monomer (c2) is one or two or more selected from among triallyl isocyanurate, trimethylol propane diallyl ether, and pentaerythritol triallyl ether; and

monomer (c3) is one or two or more monomer selected from among ethylene glycol di(meth)acrylate, triethylene glycol di(meth)acrylate, tetraethylene glycol di(meth)acrylate, trimethylol propane tri(meth)acrylate, and ethoxylated trimethylol propane tri(meth)acrylate.

5. The soft contact lens of any one of claims 1 to 4, wherein the hydrophilic surface with a contact angle relative to pure water of 60° or less is obtained without post-processing the lens-forming material after polymerization to enhance the water wettability of the surface, wherein the contact angle is the contact angle of a silicone hydrogel molded article obtained by hydrating the silicone-containing copolymer molded article.

6. The soft contact lens according to any one of claims 1 to 5, wherein the hydrated silicone hydrogel soft contact lens exhibits a water content of 35% or greater and less than 60%.

7. The soft contact lens according to any one of claims 1 to 6, wherein the hydrated silicone hydrogel soft contact lens is a soft contact lens with a maximum replacement frequency of up to one month.

8. The soft contact lens according to claim 7, wherein the hydrated silicone hydrogel soft contact lens is of a type with a replacement frequency of one day or two weeks.

9. A packaged soft contact lens product wherein the soft contact lens according to any one of claims 1 to 8 and physiological saline or soft-contact lens-use preservation solution are contained in a sealed container.