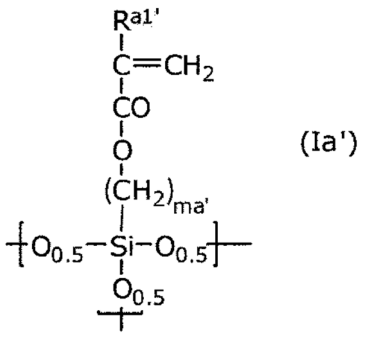
Patent Claims

1. A negative type photosensitive composition comprising
(I) an alkali-soluble resin,
(II) a black colorant,
(III) a polymerization initiator, and
(IV) a solvent,
wherein the black colorant (II) has a transmittance ratio represented by [transmittance at the wavelength of 365 nm] / [transmittance at the wavelength of 500 nm] of 1.2 or more;
wherein the alkali-soluble resin is a polysiloxane;
wherein the polysiloxane comprises a silsesquioxane skeleton; and
wherein the polysiloxane comprises a repeating unit represented by the formula (Ia'):

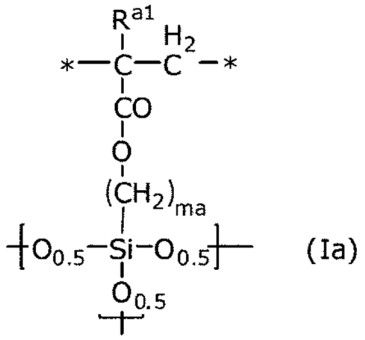


(Ia')

(wherein,
$R^{a1'}$ is hydrogen or methyl; and
ma' is each independently an integer of 1 to 6).

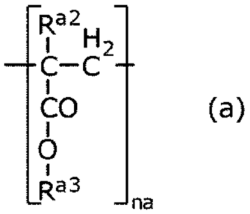
2. The composition according to claim 1, wherein the alkali-soluble resin has an acryloyl group.

3. The composition according to any of claims 1 and 2, wherein the polysiloxane comprises a repeating unit represented by the formula (Ia):



(Ia)

(wherein,
R^{a1} is hydrogen or methyl; and
ma is each independently an integer of 1 to 6), and
an acrylic polymerization unit represented by the formula (a):



(a)

(wherein,
R^{a2} is each independently hydrogen or methyl;
R^{a3} is hydrogen, a monovalent to hexavalent, C_{1-50} hydrocarbon group, wherein one or more methylene in the hydrocarbon group can be replaced by oxy, imino and/or carbonyl, and when R^{a3} is multivalent, R^{a3} connects carbonyloxy in the formula (a) with carbonyloxy contained in another repeating unit represented by the formula (a); and
na is an integer of 0 or more), and
wherein,
* of at least one repeating unit in the formula (Ia) is connected, directly or via an acrylic polymerization unit represented by the formula (a), to * of another repeating unit represented by the formula (Ia).

4. The composition according to any of claims 1 to 3, wherein the content of the black colorant is 3 to 80 mass % based on the total mass of the alkali-soluble resin.

5. The composition according to any of claims 1 to 4, further comprising a compound containing two or more (meth)acryloyloxy groups (V).

6. The composition according to any of claims 1 to 5, wherein the content of the compound containing two or more (meth)acryloyloxy groups (V) is 5 to 1,000 mass % based on the total mass of the alkali-soluble resin (I).

7. The composition according to any of claims 1 to 6, further comprising a saccharide (VI).

8. A method for producing a cured film comprising applying the composition according to any of claims 1 to 7 onto a substrate to form a coating film, exposing the coating film, and developing.

9. A cured film produced by the method according to claim 8.

10. The cured film according to claim 9, wherein the average film thickness is 5 to 100 μm.

11. The cured film according to claim 9 or 10, wherein the optical density (OD) is 2 or more.

12. A display device comprising the cured film according to any of claims 9 to 11.