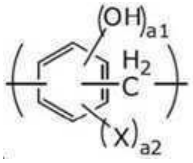
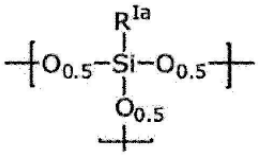
Claims

1. A negative type photosensitive composition comprising
(1) an alkali-soluble resin comprising a polymer comprising a repeating unit represented by formula (A) and a polysiloxane comprising a repeating unit represented by formula (Ia):



(A)

wherein,
X is each independently a C_{1-27} substituted or unsubstituted hydrocarbon group,
al is 1 to 2, and
a2 is 0 to 3;



(Ia)

wherein, R^{Ia} represents hydrogen, a C_{1-30} linear, branched or cyclic, saturated or unsaturated, aliphatic hydrocarbon group or aromatic hydrocarbon group,
the aliphatic hydrocarbon group and the aromatic hydrocarbon group are each unsubstituted or substituted with fluorine, hydroxy, or C_{1-8} alkoxy, and
in the aliphatic hydrocarbon group and the aromatic hydrocarbon group, methylenes are not replaced, or one or more methylene is replaced with oxy, imino or carbonyl, provide d that R^{Ia} is neither hydroxy nor alkoxy;
(II) a reflectance modifier,
(III) a polymerization initiator,
(IV) a solvent, and
(V) a compound containing two or more (meth) acryloyloxy groups.

2. The composition according to claim 1, wherein at least one X is
-L-Ar
wherein,
L is a C_{1-8} linear or branched alkylene, and
Ar is a C_{6-22} substituted or unsubstituted aryl.

3. The composition according to claim 1 or 2, wherein the alkali-soluble resin further comprises an acrylic polymer.

4. The composition according to claim 1 or 2, wherein the reflectance modifier is selected from at least one of the groups consisting of alumina, magnesium oxide, antimony oxide, titantum oxide, titanium oxynitride, titanium nitride, zirconium oxide,

aluminum hydroxide, magnesium hydroxide, bartum sulfate, magnesium carbonate, and barium carbonate.

5. The composition according to claim 1 or 2, wherein the content of the reflectance modifier is 10 to 150 mass % based on the total mass of the alkali-soluble resin.

6. A method for producing a cured film comprising applying the composition according to claim 1 or 2 on a substrate to form a film, exposing the film, and heating the film.

7. The method according to claim 6, wherein the heating temperature is 150 to 300° C.

8. A cured film produced by the method according to claim 6.

9. The cured film according to claim 8, wherein the optical density (OD) is 1 or more.

10. A device comprising the cured film according to claim 8.