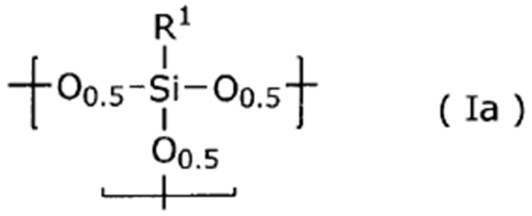
CLAIMS

~~[1]~~. A positive type photosensitive siloxane composition~~,~~ comprising: (I) a polysiloxane ~~comprising~~produced by hydrolyzing and condensing a ~~repeating unit~~silane compound represented by the following formula (~~Ia):~~ia),



(Ia)

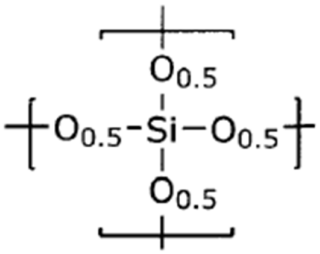
~~in which~~

$$R^1[Si(OR^2)_3]_p \qquad \text{(ia)}$$

p is 1 to 3;

~~(II)~~ and R^1 is hydrogen, a mono- to trivalent saturated or unsaturated straight, branched or cyclic aliphatic hydrocarbon group of $C_{1\text{ to }30}$, or a mono- to trivalent aromatic hydrocarbon group of $C_{6\text{ to }30}$; and R^2 is an alkyl group of $C_{1\text{ to }10}$ provided that, in said aliphatic or aromatic hydrocarbon group, one or more methylene is substituted with oxy, imido or carbonyl, or unsubstituted, one or more hydrogen is substituted with fluorine, hydroxy or alkoxy, or unsubstituted, and one or more carbon is substituted with a silicon, or unsubstituted; and further provided that, if R^1 is a di- or trivalent group, R^1 links Si atoms contained in the plural repeating units; (II) a diazonaphthoquinone derivative, (III) an additive selected from the group consisting of compounds having quaternary ammonium structures, and ~~(III) a solvent.~~

~~[2] The composition according to claim 1, wherein said polysiloxane further comprises a repeating unit represented by the following formula (Ib):~~



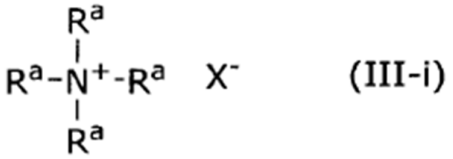
(Ib)

~~[3] The composition according to claim 1 or 2, wherein said polysiloxane forms, after prebaking, a film having a dissolution rate of 200 to 5000 Å/second in a 2.38 wt% aqueous solution of tetrarnethylanrunonium hydroxide.~~

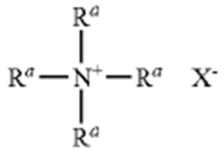
~~[4] The composition according to any of claims 1 to 3, wherein said additive (III) contains~~ wherein said quaternary ammonium structures contain nitrogen cations in an amount of 0.0005 to 0.05 weight part based of 100 weight parts of said polysiloxane and (IV) a solvent.

~~[5]~~ 2. The composition according to ~~any~~claim 1, wherein said polysiloxane forms, after prebaking, a film having a dissolution rate of ~~claims 1~~200 to ~~4~~5000 Å/second in a 2.38 wt % aqueous solution of tetramethylammonium hydroxide.

3. The composition according to claim 1, wherein said additive (III) is represented by the following formula (III-i):



(III-i)



~~in~~

In which each R^a is independently a straight, branched or cyclic alkyl group of $C_{1\ to\ 20}$, an aryl group of $C_{6\ to\ 20}$, or an arylalkyl group of $C_{7\ to\ 20}$ provided that at least one of the four R^as is an alkyl group of $C_{1\ to\ 3}$; and X^- is a halogen ion, a carboxylate ion, a nitrate ion, a sulfonate ion, or a hydrogen sulfate ion.

~~X^- is a halogen ion, a carboxylate ion, a nitrate ion, a sulfonate ion, or a hydrogen sulfate ion.~~

~~[6] A cured film formed from the positive type photosensitive siloxane composition according to any of claims 1 to 5.~~

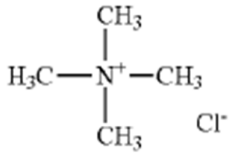
~~[7]~~ 4. The cured film according to claim ~~6~~1, having a light transmittance of 90% or more at a wavelength of 400 nm.

~~[~~5. A cured film produced by coating a substrate with a positive type photosensitive siloxane composition comprising the composition according to claim 1 and then curing the coated film.

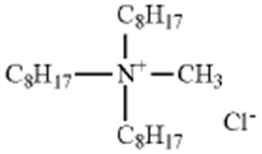
6. The composition according to claim 1, wherein said additive (III) contains nitrogen cations in an amount of 0.002 to 0.02 weight part based on 100 weight parts of the polysiloxane.

7. The composition according to claim 1, wherein said additive (III) is of the formula (III-1), (III-2) or (III-3):

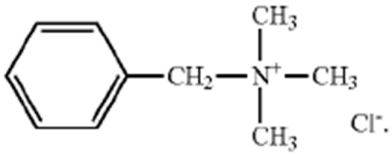
(III-1)



(III-2)



(III-3)



8~~]~~ ~~An~~. The composition according to claim 1, wherein said polysiloxane further comprises another repeating unit, wherein the compound of the formula (ia) is used in combination with the silane compound represented by the formula (ib)

$Si(OR^2)_4$ (ib).

9. In an electronic device ~~comprising~~wherein the improvement comprises the cured film according to claim ~~6 or 7.~~ 5.