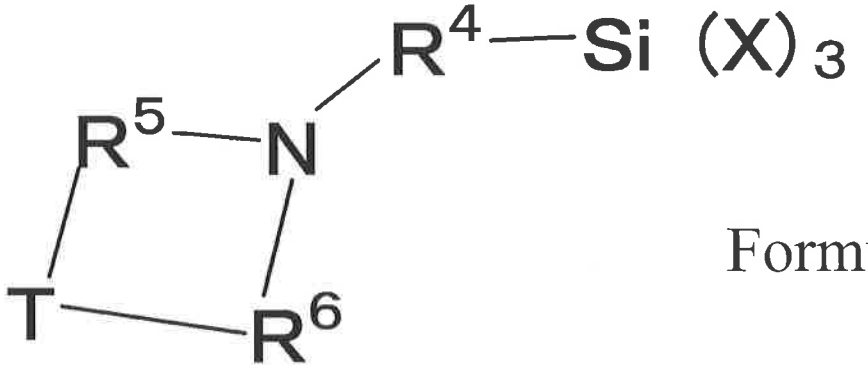
(in Formula (4), R^9 is an alkyl group; R^{10} is an alkoxy group, an acyloxy group, or a halogen atom; Y is an alkylene group or an arylene group; b is an integer of 0 or 1; and c is an integer of 0 or 1), a hydrolysis product of (B), and a hydrolysis-condensation product of (B) with at least one selected from the group consisting of a hydrolyzable organosilane ~~(A)~~ of Formula (1) or Formula (2), a hydrolysis product of ~~(A)~~Formula (1) or Formula (2), and a hydrolysis-condensation product of ~~(A)~~Formula (1) or Formula (2); and a hydrolysis-condensation product of ~~(A)~~ Formula (1) or Formula (2) and (B)~~.~~, wherein the hydrolyzable organosilane of Formula (2) is:



Formula (2)

(in Formula (2), each of R^4, R^5, and R^6 is a C_{1-6} alkylene group; T is a sulfur atom or an oxygen atom; a cyclic organic group made up with a nitrogen atom, R^5, R^6, and T is a 5- to 10-membered ring; and X is an alkoxy group, an acyloxy group, or a halogen atom).

4. The resist underlayer film forming composition according to any one of claims 1 to 3, wherein

any one of or both of: a hydrolysis-condensation product of a hydrolyzable organosilane ~~(A)~~ of Formula (1) or Formula (2); and a hydrolysis-condensation product of a hydrolyzable organosilane ~~(A)~~ of Formula (1) or Formula (2) with an organic silicon compound of Formula (3) is contained as a polymer.

5. The resist underlayer film forming composition according to any one of claims 1 to 4, further comprising an acid.

6. The resist underlayer film forming composition according to any one of claims 1 to 5, further comprising water.

7. A resist underlayer film obtained by applying the resist underlayer film forming composition as claimed in any one of claims 1 to 6 onto a semiconductor substrate, and baking the composition.

8. A method for producing a semiconductor device, the method comprising:

applying the resist underlayer film forming composition as claimed in any one of claims 1 to 6 onto a semiconductor substrate and baking the composition to form a resist underlayer film;