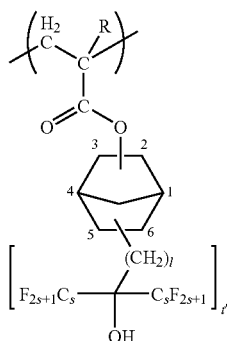


-continued



In the formulas, R is the same as defined above; j is an integer of 1 to 3; k is an integer of 1 to 3; t' is an integer of 1 to 3; l is an integer of 1 to 5; and s is an integer of 1 to 3.

**[0214]** In formula (a3-1), j is preferably 1 or 2, and more preferably 1. When j is 2, it is preferable that the hydroxyl groups be bonded to the 3rd and 5th positions of the adamantyl group. When j is 1, it is preferable that the hydroxyl group be bonded to the 3rd position of the adamantyl group.

**[0215]** j is preferably 1, and it is particularly desirable that the hydroxyl group be bonded to the 3rd position of the adamantyl group.

**[0216]** In formula (a3-2), k is preferably 1. The cyano group is preferably bonded to the 5th or 6th position of the norbornyl group.

**[0217]** In formula (a3-3), t' is preferably 1. l is preferably 1. s is preferably 1. Further, it is preferable that a 2-norbornyl group or 3-norbornyl group be bonded to the terminal of the carboxy group of the acrylic acid. The fluorinated alkyl alcohol is preferably bonded to the 5th or 6th position of the norbornyl group.

**[0218]** As the structural unit (a3), one type of structural unit may be used, or two or more types may be used in combination.

**[0219]** The amount of the structural unit (a3) within the component (A1) based on the combined total of all structural units constituting the component (A1) is preferably 5 to 50 mol %, more preferably 5 to 40 mol %, and still more preferably 5 to 25 mol %. When the amount of the structural unit (a3) is at least as large as the lower limit of the above-mentioned range, the effect of using the structural unit (a3) can be satisfactorily achieved. On the other hand, when the amount of the structural unit (a3) is no more than the upper limit of the above-mentioned range, a good balance can be achieved with the other structural units.

**[0220]** (Structural Unit (a4))

**[0221]** The component (A1) may also have a structural unit (a4) which is other than the above-mentioned structural units (a0) and (a1) to (a3), as long as the effects of the present invention are not impaired.

**[0222]** As the structural unit (a4), any other structural unit which cannot be classified as one of the above structural units (a0) and (a1) to (a3) can be used without any particular limitation, and any of the multitude of conventional structural units used within resist resins for ArF excimer lasers or KrF excimer lasers (and particularly for ArF excimer lasers) can be used.

**[0223]** As the structural unit (a4), a structural unit derived from an acrylate ester which contains a non-acid-dissociable aliphatic polycyclic group is preferable. Examples of this polycyclic group include the same groups as those described above in relation to the aforementioned structural unit (a1), and any of the multitude of conventional polycyclic groups used within the resin component of resist compositions for ArF excimer lasers or KrF excimer lasers (and particularly for ArF excimer lasers) can be used.

**[0224]** In consideration of industrial availability and the like, at least one polycyclic group selected from amongst a tricyclodecyl group, adamantyl group, tetracyclododecyl group, isobornyl group, and norbornyl group is particularly desirable. These polycyclic groups may be substituted with a linear or branched alkyl group of 1 to 5 carbon atoms.

**[0225]** Specific examples of the structural unit (a4) include units with structures represented by general formulas (a4-1) to (a4-5) shown below.

[Chemical Formula 35]

