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As preferred cycloalkylene groups, there can be mentioned cycloalkylene groups having 5 to 8 carbon atoms, such as a cyclopentylene group and a cyclohexylene group.

As preferred arylene groups, there can be mentioned arylene groups having 6 to 15 carbon atoms, such as a phenylene group, a tolylene group and a naphthylene group.

These groups may have a substituent. As the substituent, there can be mentioned, for example, one having an active hydrogen, such as an alkyl group, a cycloalkyl group, an aryl group, an amino group, an amido group, a ureido group, a urethane group, a hydroxyl group or a carboxyl group as well as a halogen atom (a fluorine atom, a chlorine atom, a bromine atom or an iodine atom), an alkoxy group (a methoxy group, an ethoxy group, a propoxy group, a butoxy group or the like), a thioether group, an acyl group (an acetyl group, a propanoyl group, a benzoyl group or the like), an acyloxy group (an acetoxo group, a propanoyloxy group, a benzoyloxy group or the like), an alkoxycarbonyl group (a methoxycarbonyl group, an ethoxycarbonyl group, a propoxycarbonyl group or the like), a cyano group, a nitro group or the like.

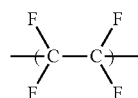
The above-mentioned alkyl group, cycloalkyl group and aryl group are the same as described hereinbefore. Further, the alkyl group may be substituted with a fluorine atom or a cycloalkyl group.

As the group that is contained in the fluorinated acid-decomposable resin according to the present invention and decomposed by the action of an acid to thereby exhibit alkali solubility, there can be mentioned, for example, $\text{—O—C(R}_{36}\text{)(R}_{37}\text{)(R}_{38}\text{)}$, $\text{—O—C(R}_{36}\text{)(R}_{37}\text{)(OR}_{39}\text{)}$, $\text{—O—COO—C(R}_{36}\text{)(R}_{37}\text{)(R}_{38}\text{)}$, $\text{—O—C(R}_{01}\text{)(R}_{02}\text{)COO—C(R}_{36}\text{)(R}_{37}\text{)(R}_{38}\text{)}$, $\text{—COO—C(R}_{36}\text{)(R}_{37}\text{)(R}_{38}\text{)}$, $\text{—COO—C(R}_{36}\text{)(R}_{37}\text{)(OR}_{39}\text{)}$ or the like.

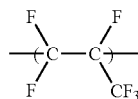
In the formulae, each of R_{36} to R_{39} represents an alkyl group, a cycloalkyl group, an aryl group, an aralkyl group or an alkenyl group. Each of R_{01} and R_{02} represents a hydrogen atom, an alkyl group, a cycloalkyl group, an alkenyl group (a vinyl group, an allyl group, a butenyl group, a cyclohexenyl group or the like), an aralkyl group (a benzyl group, a phenethyl group, a naphthylmethyl group or the like) or an aryl group.

As preferred specific examples, there can be mentioned an ether or ester group of a tertiary alkyl such as a t-butyl group, a t-amyl group, a 1-alkyl-1-cycloalkyl group, a 2-alkyl-2-adamantyl group, a 2-adamantyl-2-propyl group or a 2-(4-methylcyclohexyl)-2-propyl group, an acetal or acetal ester group of, for example, a 1-alkoxy-1-ethoxy group or a tetrahydropyranyl group, a t-alkyl carbonate group, a t-alkylcarbonylmethoxy group and the like.

Specific examples of the repeating structural units of the general formulae (FA) to (FG) will be shown below, which however in no way limit the scope of the present invention.



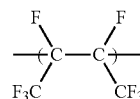
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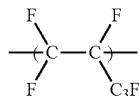
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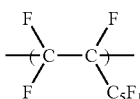
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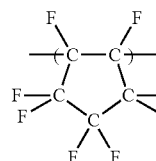
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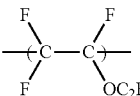
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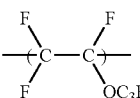
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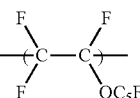
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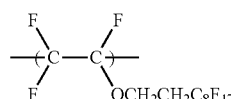
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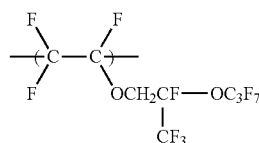
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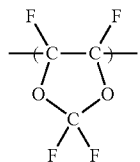
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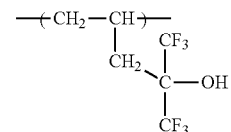
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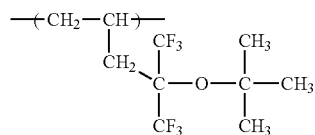
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