CLAIMS

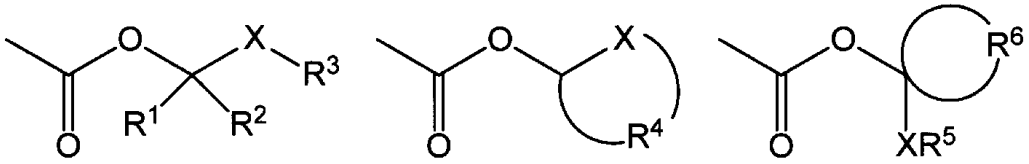
[Claim 1]

A (meth)acrylic copolymer comprising:

at least one kind of constitutional unit selected from the group consisting of a constitutional unit (A1) having at least one kind of structure (I) selected from the group consisting of structures represented by the following formula (1), formula (2), or formula (3) and;

a constitutional unit (B) derived from a macromonomer (b), a compound which has a radically polymerizable group and two or more constitutional units derived from a monomer having a radically polymerizable group.

[Chem. 1]



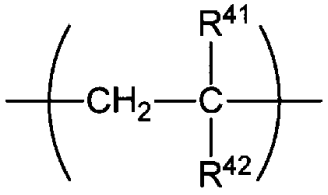
（１）　　（２）　　（３）

(where, X represents -O-, -S-, or -NR^{14}-, R^{14} represents a hydrogen atom or an alkyl group, R^1 and R^2 each represent a hydrogen atom or an alkyl group having from 1 to 10 carbon atoms, R^3 and R^5 each represent an alkyl group having from 1 to 20 carbon atoms, a cycloalkyl group, or an aryl group, and R^4 and R^6 each represent an alkylene group having from 1 to 10 carbon atoms).

[Claim 2]

The (meth)acrylic copolymer according to claim 1, wherein the macromonomer (b) is a macromonomer having two or more constitutional units represented by the following formula (b') and a number average molecular weight of from 500 to 50000:

[Chem. 2]



・・・（ｂ'）

(where, R^{41} represents a hydrogen atom, a methyl group, or CH_2OH and R^{42} represents OR^{43}, a halogen atom, COR^{44}, $COOR^{45}$, CN, $CONR^{46}R^{47}$, or R^{48}, where R^{43} to R^{47} each independently represent a hydrogen atom, an unsubstituted or substituted alkyl group, an unsubstituted or substituted alicyclic group, an unsubstituted or substituted aryl group, an unsubstituted or substituted heteroaryl group, an unsubstituted or substituted nonaromatic heterocyclic group, an unsubstituted or substituted aralkyl group, an unsubstituted or substituted alkaryl group, or an unsubstituted or substituted organosilyl group and R^{48} represents an unsubstituted or substituted aryl group or an unsubstituted or substituted heteroaryl group).

[Claim 3]

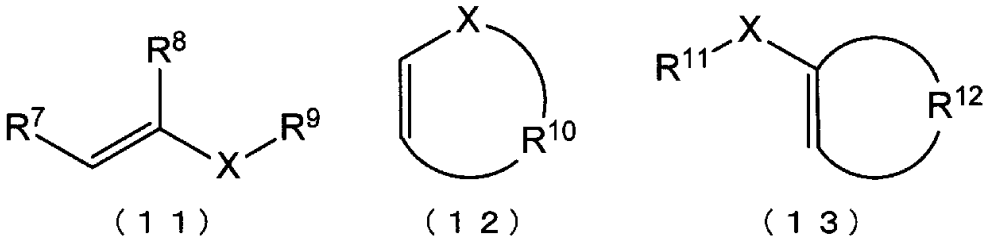
A polymer-containing composition comprising the (meth)acrylic copolymer according to claim 1 or 2.

[Claim 4]

The polymer-containing composition according to claim 3, further comprising at least one kind of alkenyl compound selected from the group consisting of a compound represented by the following formula (11), a compound represented by the following formula (12), and a compound represented by the following formula (13), wherein

the (meth)acrylic copolymer has the constitutional unit (A1):

[Chem. 5]



（１１）　（１２）　（１３）

(where, X represents -O-, -S-, or -NR^{14}-, R^{14} represents a hydrogen atom or an alkyl group, R^7 represents a hydrogen atom or an alkyl group having from 1 to 9 carbon atoms, R^8 represents a hydrogen atom or an alkyl group having from 1 to 10 carbon atoms, R^9 and R^{11} each represent an alkyl group having from 1 to 20 carbon atoms, a cycloalkyl group, or an aryl group, R^{10} represents a single bond or an alkylene group having from 1 to 9 carbon atoms, and R^{12} represents an alkylene group having from 1 to 9 carbon atoms).

[Claim 5]

An anti-fouling coating composition comprising the polymer-containing composition according to claim 3 or 4.

[Claim 6]

The anti-fouling coating composition according to claim 5, further comprising an anti-fouling agent.

[Claim 7]

The anti-fouling coating composition according to claim 6, wherein the anti-fouling agent contains at least one kind selected from the group consisting of cuprous oxide, 4-bromo-2-(4-chlorophenyl)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile, pyridine-triphenylborane, and medetomidine.

[Claim 8]

The anti-fouling coating composition according to any one of claims 5 to 7, wherein a viscosity of the anti-fouling coating composition at 25°C is 5000 mPa·s or less.

[Claim 9]

The anti-fouling coating composition according to any one of claims 5 to 8, wherein a VOC content is 500 g/L or less.

[Claim 10]

The anti-fouling coating composition according to any one of claims 5 to 9, further comprising a thermoplastic resin other than the (meth)acrylic copolymer.

[Claim 11]

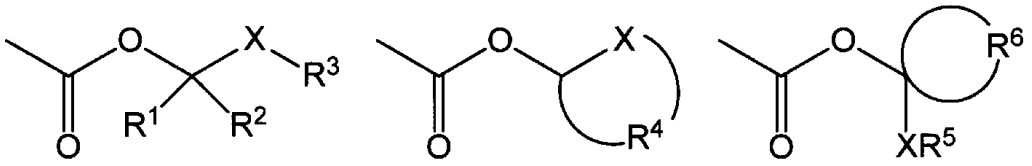
A method for producing a (meth)acrylic copolymer, the method comprising:

a step of obtaining a (meth)acrylic copolymer by polymerizing a monomer mixture containing

at least one kind of monomer (a) selected from the group consisting of a monomer (a1) having at least one kind of structure (I) selected from the group consisting of structures represented by the following formula (1), formula (2), or formula (3), and

a macromonomer (b) a compound which has a radically polymerizable group and two or more constitutional units derived from a monomer having a radically polymerizable group.

[Chem. 6]



（１）　　（２）　　（３）

(where, X represents -O-, -S-, or -NR^{14}-, R^{14} represents a hydrogen atom or an alkyl group, R^1 and R^2 each represent a hydrogen atom or an alkyl group having from 1 to 10 carbon atoms, R^3 and R^5 each represent an alkyl group having from 1 to 20 carbon atoms, a cycloalkyl group, or an aryl group, R^4 and R^6 each represent an alkylene group having from 1 to 10 carbon atoms).