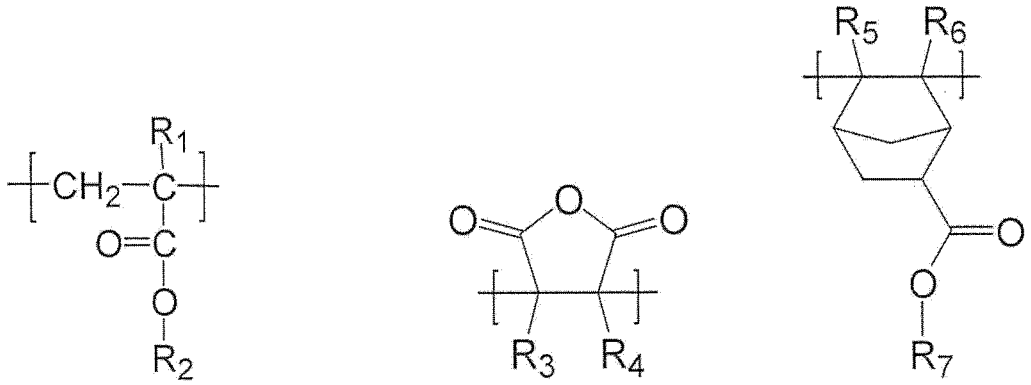
CLAIMS

1. A polymer compound comprising: 100 parts by mole of a repeating unit represented by Formula 1 below; 10 to 900 parts by mole of a repeating unit represented by Formula 2 below; and 10 to 900 parts by mole of a repeating unit represented by Formula 3 below, wherein the polymer compound has a weight average molecular weight of 1,000 to 100,000:

<Formula 1> <Formula 2> <Formula 3>

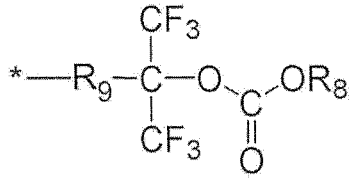


wherein R_1, R_3, R_4, R_5, and R_6 are each independently a hydrogen (H) atom, a fluorine (F) atom, or a substituted or unsubstituted C_1-C_{20} alkyl group,

R_2 is a substituted or unsubstituted C_1-C_{10} alkyl group or a substituted or unsubstituted C_1-C_{10} cyclic alkyl group, wherein at least one hydrogen atom of the alkyl group and the cyclic alkyl group is substituted with a group represented by Formula a below,

R_7 is a hydrogen atom or a substituted or unsubstituted C_1-C_{25} alkyl group,

<Formula a>

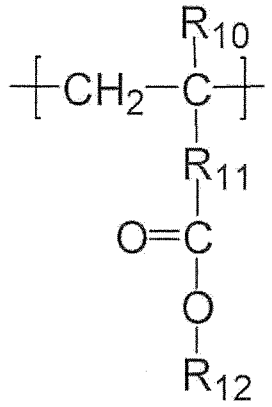


wherein R_8 is a hydrogen atom or a substituted or unsubstituted C_1-C_{25} alkyl group, R_9 is a single bond or a substituted or unsubstituted C_1-C_{10} alkylene or cycloalkylene group, and * indicates a binding site.

2. The polymer compound of claim 1, wherein R_1, R_3, R_4, R_5, and R_6 are each independently one of a hydrogen (H) atom, a fluorine (F) atom, a methyl group, an ethyl group, a propyl group, a C_1-C_{20} alkyl group substituted with at least one fluorine,

6. The polymer compound of claim 1, further comprising at least one of 10 to 900 parts by mole of a repeating unit represented by Formula 4 below and 1 to 100 parts by mole of a repeating unit represented by Formula 5 below:

<Formula 4>

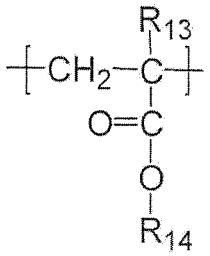


wherein R_{10} is a hydrogen (H) atom, a fluorine (F) atom, or a substituted or unsubstituted C_1-C_{20} alkyl group,

R_{11} is a substituted or unsubstituted C_1-C_{10} alkylene or cycloalkylene group, and

R_{12} is a hydrogen atom or a substituted or unsubstituted C_1-C_{25} alkyl group,

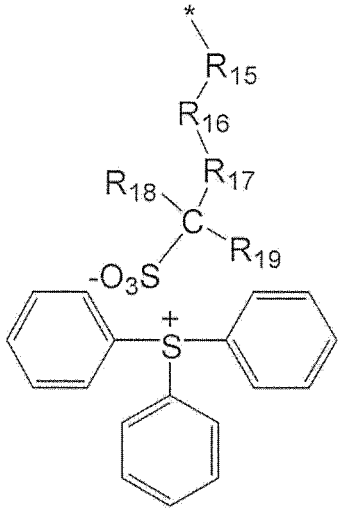
<Formula 5>



wherein R_{13} is a hydrogen (H) atom, a fluorine (F) atom, or a substituted or unsubstituted C_1-C_{20} alkyl group, and

R_{14} is represented by Formula b below,

<Formula b>



wherein R_{15} and R_{17} are each independently a single bond or a substituted or unsubstituted C_1-C_{10} alkylene group, R_{16} is a single bond, -O-, or -COO-, R_{18} and R_{19} are each independently a hydrogen (H) atom, a fluorine (F) atom, or a substituted or unsubstituted C_1-C_{20} alkyl group, and * indicates a binding site.

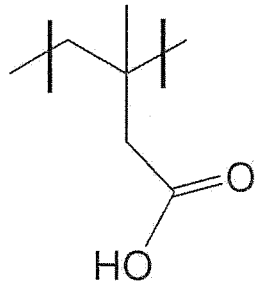
7. The polymer compound of claim 6, wherein R_{10} and R_{13} are each independently a hydrogen (H) atom, a fluorine (F) atom, a methyl group, an ethyl group, a propyl group, a C_1-C_{20} alkyl group substituted with at least one fluorine, or a C_1-C_{20} alkyl group substituted with at least one hydroxyl group,

R_{12} is a hydrogen atom, a C_1-C_{25} alkyl group substituted with at least one hydroxyl group, or a C_1-C_{25} alkyl group substituted with at least one carboxyl group,

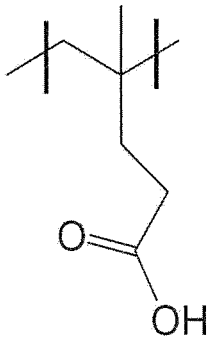
R_{11}, R_{15}, and R_{17} are each independently a single bond or a substituted or unsubstituted C_1-C_5 alkylene group, R_{16} is -COO-, and R_{18} and R_{19} are each independently a fluorine atom.

8. The polymer compound of claim 6, wherein the repeating unit represented by Formula 4 above is represented by any of Formulae 4-1 through 4-12 below:

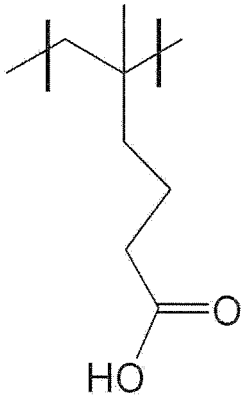
<Formula 4-1> <Formula 4-2> <Formula 4-3>



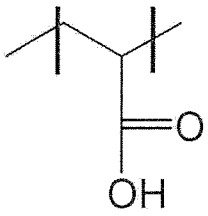
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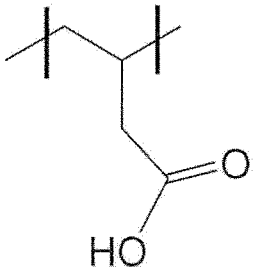
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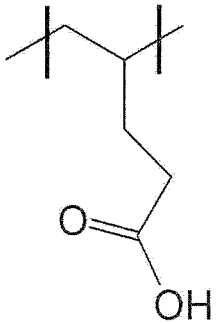
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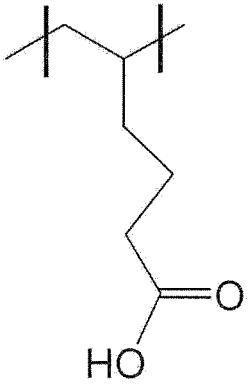
<Formula 4-7>



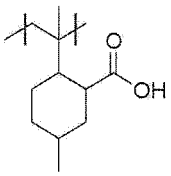
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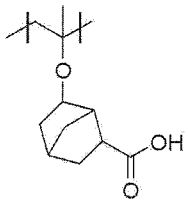
<Formula 4-9>



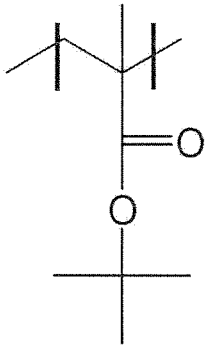
<Formula 4-10>

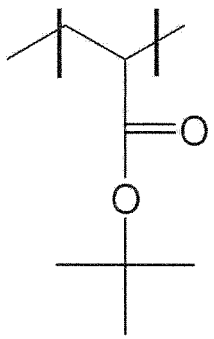


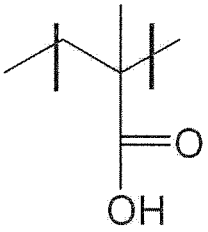
<Formula 4-11>



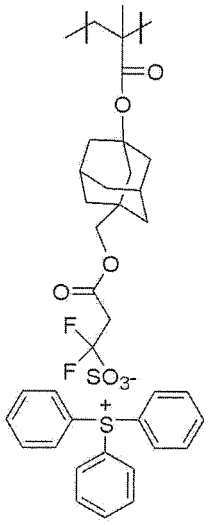
<Formula 4-12>

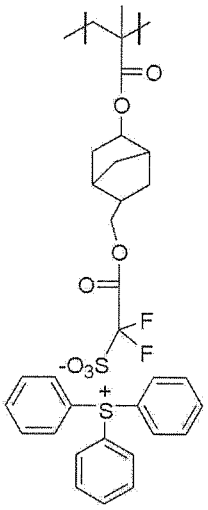






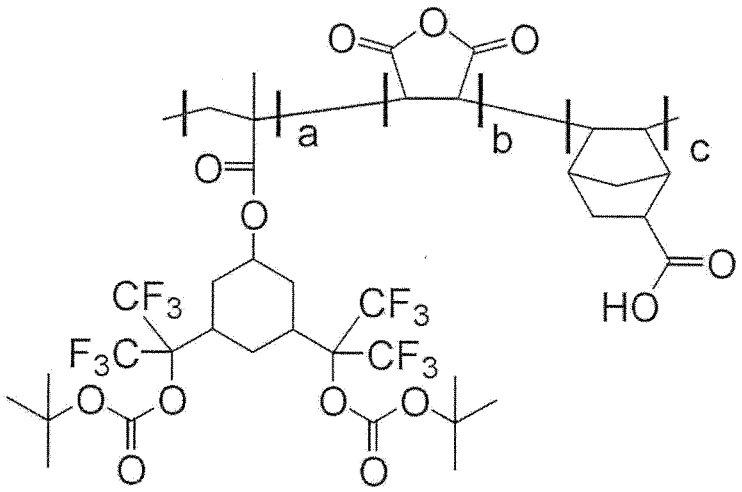
9. The polymer compound of claim 6, wherein the repeating unit represented by Formula 5 is represented by any one of Formulae 5-1 through 5-11 below:



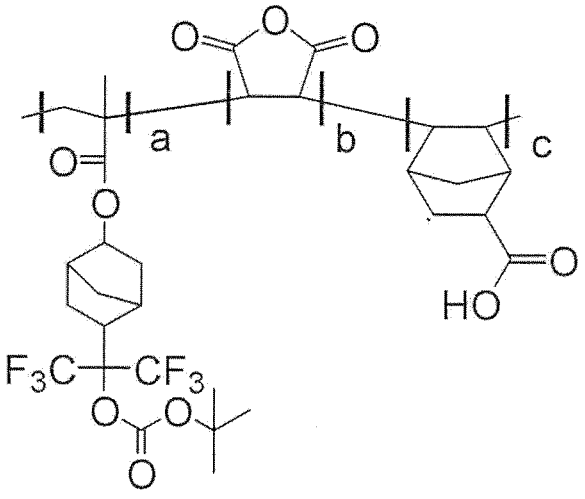


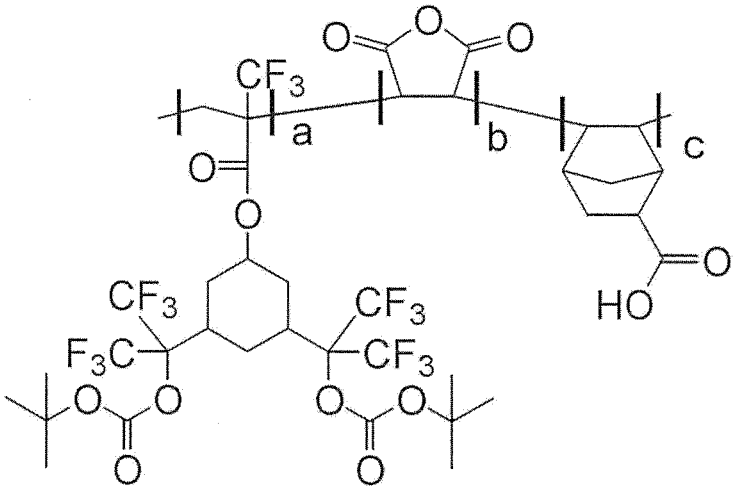
10. The polymer compound of claim 1, wherein the polymer compound is represented by any one of Formulae 6 through 11 below:

<Formula 6>



<Formula 7>

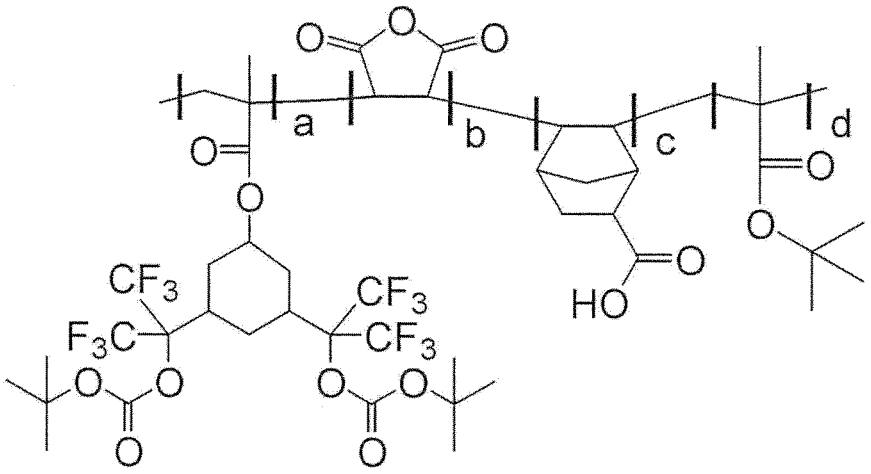




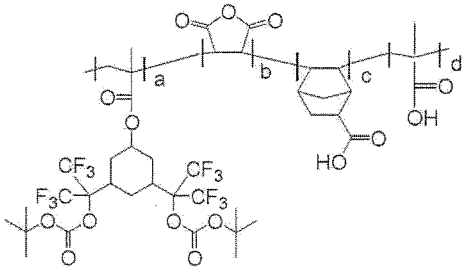
wherein a is 100 parts by mole, b is 10 to 900 parts by mole, and c is 10 to 900 parts by mole.

11. The polymer compound of claim 6, wherein the polymer compound is represented by any one of Formulae 12 through 20 below:

<Formula 12>



<Formula 13>



<Formula 14>

<Formula 15>