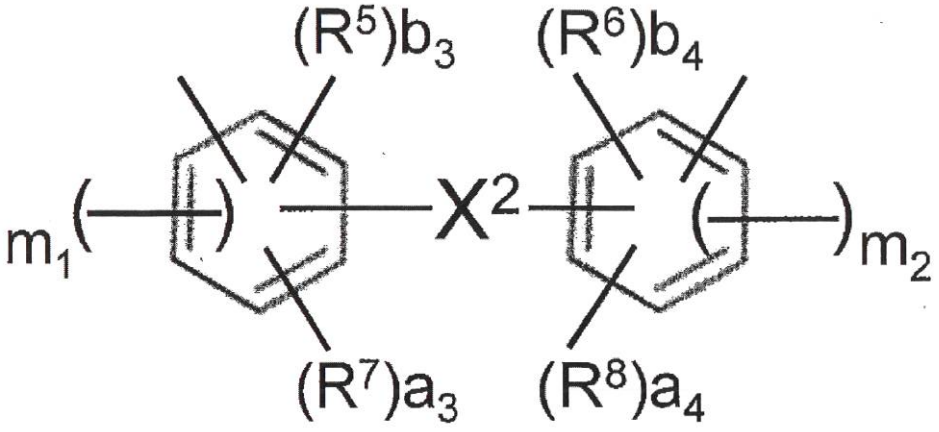
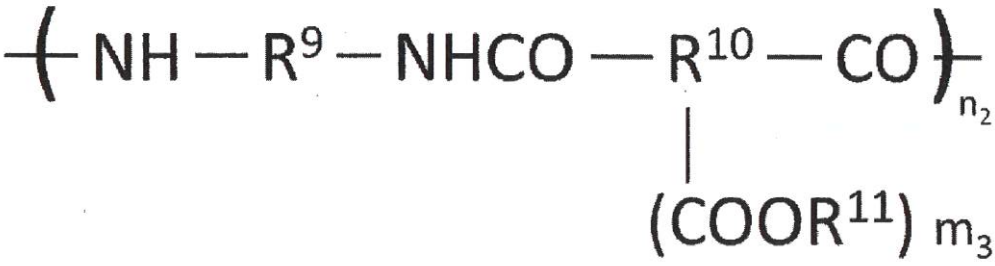


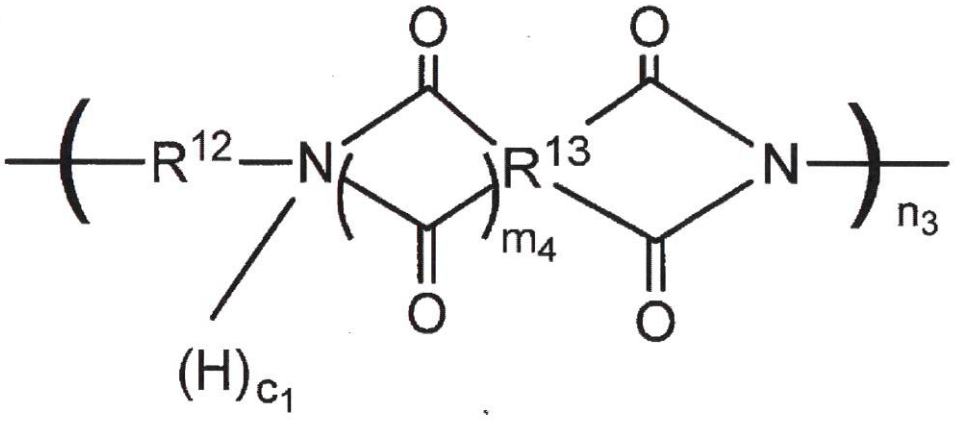
(2)

wherein the general formula (2) is a trivalent or tetravalent organic group, and R^5 and R^6 each independently represent a halogen atom or a monovalent organic group having 1 to 3 carbon atoms; R^7 and R^8 each represent an organic group selected from a hydroxyl group, a carboxyl group and a sulfonic acid group; X^2 is a single bond, O, S, NH, SO_2, CO or a divalent organic group having 1 to 3 carbon atoms or a divalent crosslinked structure formed by linking two or more of these; a_3, a_4, b_3 and b_4 are integers of 0 to 3, $a_3 + b_3$ is an integer of 0 to 3, $a_4 + b_4$ is an integer of 0 to 3, at least one of a_3 and a_4 is an integer of 1 or more, and at least one of b_3 and b_4 is an integer of 1 or more; m_1 and m_2 are integers of 0 or 1, and $m_1 + m_2$ is an integer of 1 or 2;



(3)

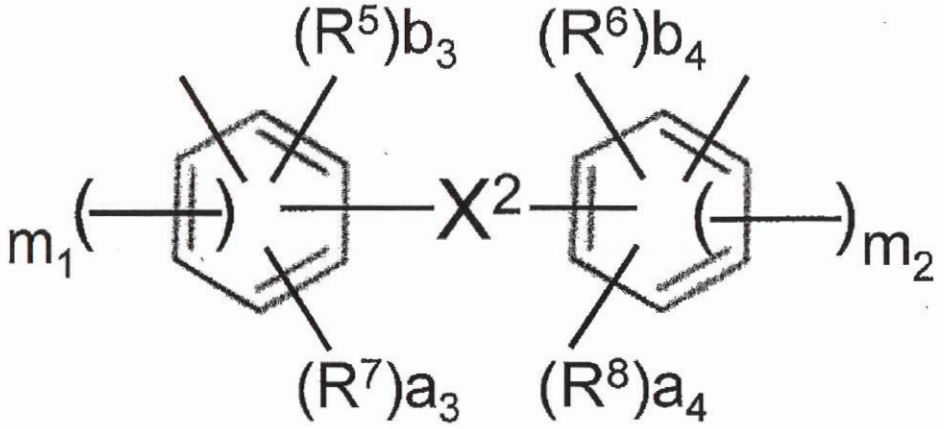
wherein R^9 represents a divalent organic group having 2 to 50 carbon atoms; R^{10} represents a trivalent or tetravalent organic group having 2 to 50 carbon atoms; R^9 represents a structure selected from the general formula (1) or (6), and/or R^{10} represents a structure selected from the general formula (2) or (7); R^{11} represents hydrogen or an organic group having 1 to 10 carbon atoms; m_3 is an integer of 1 or 2; and n_2 represents a range of 10 to 100,000;



(4)

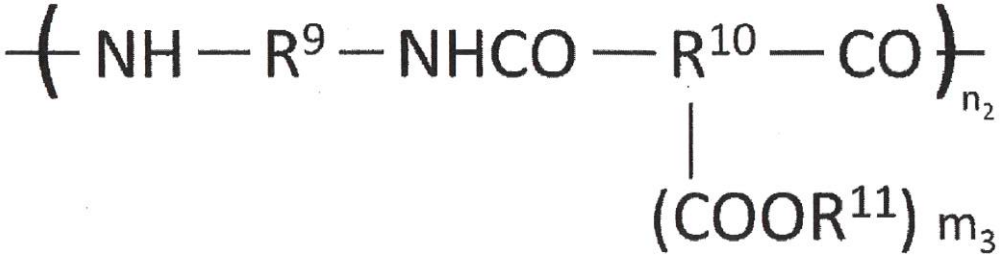
wherein R^{12} represents a divalent organic group having 2 to 50 carbon atoms; R^{13} represents a trivalent or tetravalent organic group having 2 to 50 carbon atoms; R^{12} represents a structure selected from the general formula (1) or (6), and/or R^{13} represents a structure selected from the general formula (2)

of 0 to 4, and at least one of b_1 and b_2 is an integer of 1 or more;



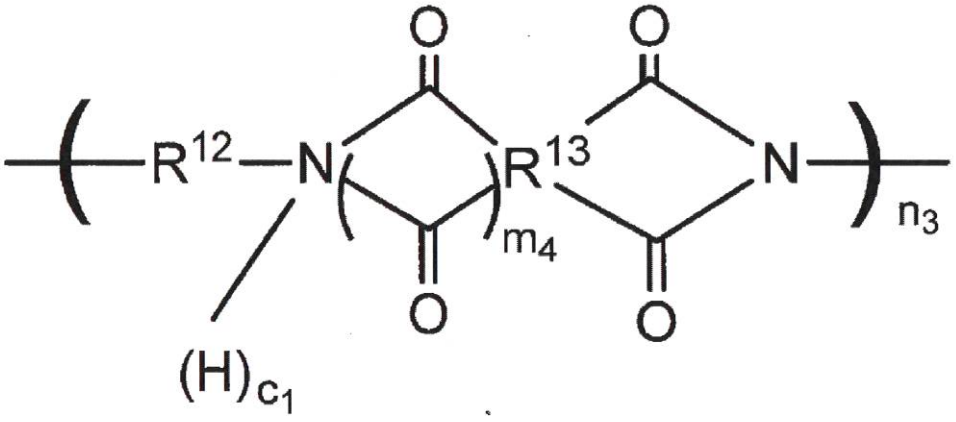
(2)

wherein the general formula (2) is a trivalent or tetravalent organic group, and R^5 and R^6 each independently represent a halogen atom or a monovalent organic group having 1 to 3 carbon atoms; R^7 and R^8 each represent an organic group selected from a hydroxyl group, a carboxyl group and a sulfonic acid group; X^2 is a single bond, O, S, NH, SO_2, CO or a divalent organic group having 1 to 3 carbon atoms or a divalent crosslinked structure formed by linking two or more of these; a_3, a_4, b_3 and b_4 are integers of 0 to 3, $a_3 + b_3$ is an integer of 0 to 3, $a_4 + b_4$ is an integer of 0 to 3, at least one of a_3 and a_4 is an integer of 1 or more, and at least one of b_3 and b_4 is an integer of 1 or more; m_1 and m_2 are integers of 0 or 1, and $m_1 + m_2$ is an integer of 1 or 2;



(3)

wherein R^9 represents a divalent organic group having 2 to 50 carbon atoms; R^{10} represents a trivalent or tetravalent organic group having 2 to 50 carbon atoms; R^9 represents a structure selected from the general formula (1) or (6), and/or R^{10} represents a structure selected from the general formula (2) or (7); R^{11} represents hydrogen or an organic group having 1 to 10 carbon atoms; m_3 is an integer of 1 or 2; and n_2 represents a range of 10 to 100,000;



(4)

wherein R^{12} represents a divalent organic group having 2 to 50 carbon atoms; R^{13} represents a trivalent or tetravalent organic group having 2 to 50 carbon atoms; R^{12} represents a structure selected from the general formula (1) or (6), and/or R^{13} represents a structure selected from the general formula (2)