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$(\text{CH}_2)_2\text{OCOC}(\text{R}^4)=\text{CH}_2$; C_6H_5 ; an alkyl group having 1 to 12 carbon atoms; HOCH_2 ; HOCH_2CH_2 ; R^5_2N ; R^6O ; R^6S ; R^6CO ; R^7CONH ; R^7COCO ,

wherein $\text{R}^4=\text{H}$ or CH_3 ;

wherein $\text{R}^5=\text{H}$ or an alkyl group having 1 to 8 carbon atoms;

wherein R^6 =an alkyl group having from 1 to 6 carbon atoms; and

wherein R^7 =an alkyl group having 1 to 6 carbon atoms.

11. A method according to claim 7 wherein said compound of formula (I) is phenyliminodiacetic acid, a salt thereof or an ester thereof.

12. A method according to claim 7 wherein R^2 comprises a residue of crotonic acid, a salt thereof or an ester thereof.

13. A method for forming a polymeric material at and a strong integrated bond with a dental or other substrate surface comprising:

(a) combining an etchant/primer composition comprising:
a compound having the formula



wherein

$\text{R}=\text{R}^1$ or R^2 ;

R^1 =an aromatic group;

R^2 =a conjugated aliphatic group;

Y =a single bond, CH_2 , CHCH_3 or $\text{C}=\text{CH}_2$; and each M is independently H, an alkali metal, an alkaline earth metal, aluminum, a transition or redox metal or an alkyl group having 1 to 18 carbon atoms, with the proviso that when both M groups are alkyl groups, the compound corresponding to formula I be capable of being easily hydrolyzed, displaced, or exchanged with other reagents present in the etchant/primer composition with

a polar solvent system and an adhesive monomer system to form an etchant/primer/self-initiating adhesive monomer system;

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(b) applying said etchant/primer/self-initiating adhesive monomer system to the surface; and

(c) curing the etchant/primer/self-initiating adhesive monomer system.

14. A method according to claim 13 wherein said polar solvent system comprises an aqueous solvent.

15. A method according to claim 14 wherein said aqueous solvent comprises water and acetone.

16. A method according to claim 13 wherein R^1 comprises C_6H_5 or $\text{C}_6\text{H}_4\text{R}^3$, and

wherein $\text{R}^3=\text{N}(\text{CH}_2\text{CO}_2\text{M})_2$; $\text{C}_6\text{H}_4\text{N}(\text{CH}_2\text{CO}_2\text{M})_2$; $\text{O}(\text{CH}_2)_2\text{OC}_6\text{H}_4\text{N}(\text{CH}_2\text{CO}_2\text{M})_2$; $\text{CH}=\text{CH}_2$; CO_2H ; F ; Cl ; Br ; I ; OH ; SH ; (m- or p-) $\text{CH}_2\text{C}_6\text{H}_4$ (m- or p-) $\text{CH}=\text{CH}_2$; $\text{OCOC}(\text{R}^4)=\text{CH}_2$; $\text{NR}^4\text{COC}(\text{R}^4)=\text{CH}_2$; $(\text{CH}_2)_2\text{OCOC}(\text{R}^4)=\text{CH}_2$; C_6H_5 ; an alkyl group having 1 to 12 carbon atoms; HOCH_2 ; HOCH_2CH_2 ; R^5_2N ; R^6O ; R^6S ; R^6CO ; R^7CONH ; R^7COCO ,

wherein $\text{R}^4=\text{H}$ or CH_3 ;

wherein $\text{R}^5=\text{H}$ or an alkyl group having 1 to 8 carbon atoms;

wherein R^6 =an alkyl group having from 1 to 6 carbon atoms; and

wherein R^7 =an alkyl group having 1 to 6 carbon atoms.

17. A method according to claim 13 wherein said compound of formula (I) is phenyliminodiacetic acid, a salt thereof or an ester thereof.

18. A method according to claim 13 wherein R^2 comprises a residue of crotonic acid, a salt thereof or an ester thereof.

19. A method according to claim 13, wherein said adhesive monomer system is an acrylic adhesive monomer system.

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