

12. The etchant/primer composition of claim 9, wherein said polar solvent system comprises an aqueous solvent.

13. The etchant/primer composition of claim 9, wherein said polar solvent system comprises acetone and water.

14. The etchant/primer composition of claim 13, wherein a ratio of said water to said acetone is in the range from about 5:90 to about 90:5 by volume.

15. The etchant/primer composition of claim 9, wherein said polar solvent system comprises a solvent selected from the group consisting of water, acetone, dimethylsulfoxide, ethanol and mixtures thereof.

16. The etchant/primer composition of claim 9,

wherein $R=R^1$ and R^1 comprises C_6H_5 or $C_6H_4R^3$;

wherein $R^3=N(CH_2CO_2M)_2$; $C_6H_4N(CH_2CO_2M)_2$; R^5O
 $(CH_2)_2OC_6H_4N(CH_2CO_2M)_2$; $CH=CH_2$; CO_2H ; F ;
 Cl ; Br ; I ; OH ; SH ; (m- or p-) $CH_2C_6H_4$ (m- or p-)
 $CH=CH_2$; $OCOC(R^4)=CH_2$; $NR^4COC(R^4)=CH_2$;
 $(CH_2)_2OCOC(R^4)=CH_2$; C_6H_5 ; an alkyl group having
 1 to 12 carbon atoms; $HOCH_2HOCH_2CH_2$; R^5_2N ;
 R^6O ; R^6S ; R^6CO ; R^7CONH ; R^7COCO ,

wherein $R^4=H$ or CH_3 ;

wherein $R^5=H$ 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. The etchant/primer composition of claim 9, wherein said alkyl M group is t-butyl.

18. An etchant/primer composition comprising:

a compound having the formula:



wherein $R=R^1$ or R^2 ;

R^1 =an aromatic group;

R^2 =a conjugated unsaturated aliphatic group;

Y =a single bond, CH_2 , $CHCH_3$ or $C=CH_2$; 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;

a polar solvent system; and

nitric acid.

19. The etchant/primer composition of claim 18, wherein said nitric acid is present in an amount ranging from about 0.05% to about 5.0% by weight based on a total weight of said etchant/primer composition.

20. The etchant/primer composition of claim 19, wherein said nitric acid is present in an amount ranging from about 0.1% to about 2.5% by weight based on said total weight.

21. The etchant/primer composition of claim 18, wherein said polar solvent system comprises an aqueous solvent.

22. The etchant/primer composition of claim 18, wherein said polar solvent system comprises acetone and water.

23. The etchant/primer composition of claim 22, wherein a ratio of said water to said acetone is in the range from about 5:90 to about 90:5 by volume.

24. The etchant/primer composition of claim 18, wherein said polar solvent system comprises a solvent selected from the group consisting of water, acetone, dimethylsulfoxide, ethanol and mixtures thereof.

25. The etchant/primer composition of claim 18,

wherein $R=R^1$ and R^1 comprises C_6H_5 or $C_6H_4R^3$;

wherein $R^3=N(CH_2CO_2M)_2$; $C_6H_4N(CH_2CO_2M)_2$; R^5O
 $(CH_2)_2OC_6H_4N(CH_2CO_2M)_2$; $CH=CH_2$; CO_2H ; F ;
 Cl ; Br ; I ; OH ; (m- or p-) $CH_2C_6H_4$ (m- or p-)
 $CH=CH_2$; $OCOC(R^4)=CH_2$; $NR^4COC(R^4)=CH_2$;
 $(CH_2)_2OCOC(R^4)=CH_2$; C_6H_5 ; an alkyl group hav-
 ing 1 to 12 carbon atoms; $HOCH_2$; $HOCH_2CH_2$; R^5_2N ;
 R^6O ; R^6S ; R^6CO ; R^7CONH ; R^7COCO ,

wherein $R^4=H$ or CH_3 ;

wherein $R^5=H$ 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.

26. The etchant/primer composition of claim 18, wherein said alkyl M group is t-butyl.

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