

at least one aromatic ring or moiety containing electron-withdrawing substituents that do not interfere with free radical polymerization.

22. A method as in claim 21 wherein the strong acid is nitric acid and its concentration is from about 0.1% to about 20%.

23. A method as in claim 21 wherein the strong acid is nitric acid and its concentration is from about 2 to 5%.

24. A method as in claim 21 wherein the polyvalent cation is selected from the group consisting of aluminum and ferric ions, used separately or together, and in concentration between about 0.00001% and saturation.

25. A method as in claim 24 wherein the concentration of aluminum and ferric ions is between about 1% and about 5%.

26. A method as in claim 21 wherein the polyfunctional acid is selected from the group consisting of oxalic, citric, pyruvic, tartaric, and other oligocarboxylic acids, used separately or in combinations, and in concentrations between about 0.0001% and saturation.

27. A method as in claim 26 wherein the concentration of polyfunctional acid is between about 1% and about 10%.

28. A method as in claim 21 wherein at least one compound of subpart (a)(4) is selected from the group consisting of N-phenylglycine, N(p-tolyl) glycine, N-phenylalanine, sarkosine, N-lauroylsarkosine, glycine, N,N-dimethylglycine, 3(N-phenyl) amino propionic acid, 3(N-p-tolyl) amino propionic acid, omega-amino fatty acids, N-substituted-omega-amino fatty acids, the addition reaction product of N-phenyl glycine and glycidyl reagents, the reaction product of N(substituted phenyl) glycine and glycidyl reagents, and other amino acids; and wherein such compound or compounds, used separately or in combinations, are used in concentrations between about 0.1% and saturation.

29. A method as in claim 28 wherein the concentration of the compound of subpart (a)(4) is between about 1% and about 10%.

30. A method as in claim 28 wherein the concentration of the compound of subpart (a)(4) is equal to or less than the normality of the strong acid of subpart (a)(1).

31. A method as in claim 1 wherein the substrate surface is a dentin surface or an enamel surface.

32. A method as in claim 12 wherein the substrate surface is a dentin surface or an enamel surface.

33. A method as in claim 21 wherein the substrate surface is a dentin surface or an enamel surface.

34. A structure comprising a composite material or resin bonded to a dentin or enamel surface which has been prepared by the method of claim 1.

35. A structure comprising a composite material or resin bonded to a dentin or enamel surface which has been prepared by the method of claim 12.

36. A structure comprising a composite material or resin bonded to a dentin or enamel surface which has been prepared by the method of claim 21.

37. A structure comprising a composite material or resin bonded to the surface of a natural or industrial substrate which has been prepared by the method of claim 1.

38. A structure comprising a composite material or resin bonded to the structure of a natural or industrial substrate which has been prepared by the method of claim 12.

39. A structure comprising a composite material or resin bonded to the surface of a natural or industrial

substrate which has been prepared by the method of claim 21.

40. An article of manufacture comprising in combination;

(a) a first container containing a composition comprising (1) at least one strong acid and (2) at least one compound selected from the group consisting of (1) N-phenylglycine, (2) the adduct of N(p-tolyl) glycine and glycidyl methacrylate, (3) the addition reaction product of N-phenylglycine and glycidyl methacrylate, and (4) other amino acids; and

(b) a second container containing a composition comprising at least one monomer selected from the group consisting of (1) the addition reaction product of pyromellitic acid dianhydride and 2-hydroxyethyl methacrylate, (2) the addition reaction product of 3,3',4,4'-benzophenonetetracarboxylic dianhydride and 2-hydroxyethyl methacrylate, (3) 4-methacryloxyethyltrimellitic anhydride, and (4) other compounds containing at least one group or moiety capable of free radical polymerization and at least one aromatic ring or moiety containing electron-withdrawing substituents that do not interfere with free radical polymerization;

said first and second containers being packaged together in said article of manufacture.

41. An article of manufacture as in claim 40 wherein the contents of the first and second containers are in solutions.

42. An article of manufacture comprising in combination:

(a) a first container containing at least one strong acid;

(b) a second container containing at least one compound selected from the group consisting of (1) N-phenylglycine, (2) the adduct of N(p-tolyl) glycine and glycidyl methacrylate, (3) the addition reaction product of N-phenylglycine and glycidyl methacrylate, and (4) other amino acids;

(c) a third container at least one monomer selected from the group consisting of (1) the addition reaction product of pyromellitic acid dianhydride and 2-hydroxyethyl methacrylate, (2) the addition reaction product of 3,3',4,4'-benzophenonetetracarboxylic dianhydride and 2-hydroxyethyl methacrylate, (3) 4-methacryloxyethyltrimellitic anhydride, and (4) other compounds containing at least one group or moiety capable of free radical polymerization and at least one aromatic ring or moiety containing electron-withdrawing substituents that do not interfere with free radical polymerization;

said first and second and third containers being packaged together in said article of manufacture.

43. An article of manufacture as in claim 42 wherein the contents of the first, second and third containers are in solutions.

44. An article of manufacture comprising in combination:

(a) a first container containing (1) at least one strong acid or acidic salt, (2) at least one polyvalent cation, (3) at least one polyfunctional acid which can form relatively water-insoluble precipitates with calcium or polyvalent cations at pH values above that of the aqueous solution, and (4) at least one compound selected from the group consisting of (1) N-phenylglycine, (2) the adduct of N(p-tolyl) glycine and glycidyl methacrylate, (3) the addition