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4. The resin of claim 1, wherein the trialkoxyorganosilane is 3-methacryloxypropyltrimethoxysilane.

5. The resin of claim 1, wherein the trialkoxyorganosilane is 10-methacryloxydecyltrimethoxysilane.

6. The resin of claim 1, wherein the trialkoxyorganosilane is 3-methacryloxypropyltriacetoxysilane.

7. The resin of claim 1, wherein R₁₀ is selected from the group consisting of an ester and an amide.

8. The resin of claim 1, wherein the hydroxylated acrylic compound is 2,2-bis-(4-(2'-hydroxy-3'-methacryloxypropoxy)phenyl)propane.

9. The resin of claim 1, wherein the carboxylated acrylic compound is pyromellitic acid di-2-methacryloyloxyethyl ester.

10. The resin of claim 7, wherein the trialkoxyorganosilane is 3-methacryloxypropyltrimethoxysilane.

11. The resin of claim 7, wherein the trialkoxyorganosilane is 10-methacryloxydecyltrimethoxysilane.

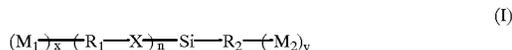
12. The resin of claim 7, wherein the trialkoxyorganosilane is 3-methacryloxypropyltriacetoxysilane.

13. The resin of claim 1, wherein X is O or



and the one or more protic groups of R₄ are selected from the group consisting of OH and CO₂H.

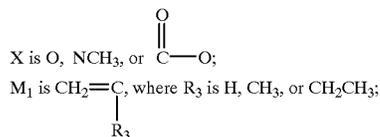
14. A silylated resin represented by the general formula (I):



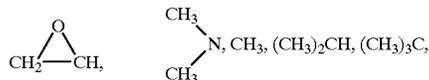
in which:

R₁ is an aliphatic, cycloaliphatic, aryl, hydrocarbon, or fluorocarbon group;

R₂ is the same as R₁ or a different aliphatic, cycloaliphatic, aryl, hydrocarbon, or fluorocarbon group;



M₂ is the same as M₁ or a different functional or non-functional group selected from the group consisting of:



CF₃, and C₆H₅;

n is 1-3;

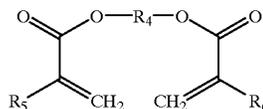
x is 1-20; and

y is 1-20;

which comprises the reaction product of the exchange reaction of a hydroxylated, animated, or carboxylated acrylic compound selected from the group consisting of

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β-hydroxyethyl methacrylate, t-butylaminoethyl methacrylate and a compound represented by the general formula (II):



(II)

in which:

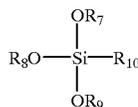
R₄ is an aliphatic, cycloaliphatic, aryl, hydrocarbon, or fluorocarbon group with one or more protic functional groups selected from the group consisting of:

OH, N—H, and CO₂H;

R₅ is H or CH₃; and

R₆ is H or CH₃;

with tetraalkoxysilane, dialkoxysilane, trialkoxyorganosilane or triacyloxyorganosilane, wherein said trialkoxyorganosilane or triacyloxyorganosilane is represented by the general formula (III):

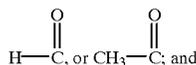


(III)

in which:

R₇, R₈, and R₉ each is:

CH₃, CH₃CH₂, CH₃CH₂CH₂, (CH₃)₂CH,



R₁₀ is an aliphatic, cycloaliphatic, or aryl group which can optionally be substituted with a group from the group consisting of an acrylic group, a methacrylic group, an epoxy group, and a substituted amino, hydroxyl, or carboxylic acid group.

15. The resin of claim 14, wherein X is O or



and the one or more protic groups of R₄ are selected from the group consisting of OH and CO₂H.

16. The resin of claim 14, wherein the acrylic compound is a member of the group consisting of β-hydroxyethyl methacrylate and t-butylaminoethyl methacrylate.

17. The resin of claim 14, wherein the hydroxylated acrylic compound is a combination of 2,2-bis-(4-(2'-hydroxy-3'-methacryloxypropoxy) phenyl)propane and β-hydroxyethyl methacrylate.

18. The resin of claim 14, wherein the tetraalkoxysilane is tetraethoxysilane and the dialkoxysilane is 3-methacryloxypropylmethyldimethoxysilane.

19. The resin of claim 14, wherein the silane is tetraethoxysilane or 3-methacryloxypropylmethyldimethoxysilane.