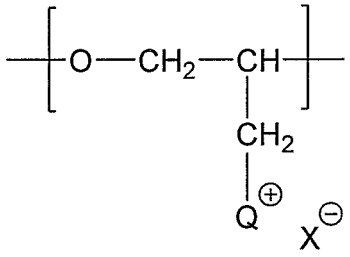
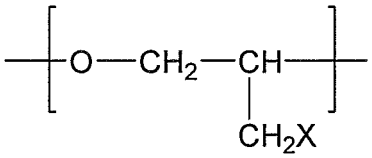
and electrical current is supplied to the electrolytic deposition composition to deposit copper on the substrate. In these embodiments, the aqueous electrolytic composition comprises copper ions, an acid, a suppressor, and a quaternized poly(epihalohydrin) comprising n repeating units corresponding to structure 1N and p repeating units corresponding to structure 1P:



(1N)



(1P)

wherein Q has a structure corresponding to that which may be obtained by reacting a pendent methylene halide group of poly(epihalohydrin) with a tertiary amine selected from the group consisting of: (i) $NR^1R^2R^3$ wherein each of R^1, R^2 and R^3 is independently selected from the group consisting of substituted or unsubstituted alkyl, alicyclic, aralkyl, substituted or unsubstituted alkenyl, substituted or unsubstituted alkynyl, aryl and heterocyclic; (ii) an N-substituted and optionally further substituted heteroalicyclic amine wherein the N-substituent is selected from the group consisting of substituted or unsubstituted alkyl, alicyclic, aralkyl, aryl, and heterocyclic; and (iii) a substituted or unsubstituted nitrogen-containing heteroaryl compound; n is an integer between 3 and 35, p is an integer between 0 and 25; X is a halo substituent; and X^- is a monovalent anion, ordinarily a halide ion. Where any

an accelerator in a concentration between about 1 and about 100 mg/L; and

a suppressor in a concentration up to 4000 mg/L.

16. A process as set forth in claim 15, wherein the concentration of said quaternized polyepihalohydrin in said electrolytic composition is between 1 and about 100 mg/L.

17. A process as set forth in claim 1, wherein:

an electrolytic circuit is established comprising the metalizing substrate comprising the conductive layer on a surface of the dielectric or semiconductor, an anode, the aqueous electrolytic composition in contact with said conductive layer and said anode, and a power source having a positive terminal in electrical communication with the anode and a negative terminal in electrical communication with the conductive layer; and

a current is passed through said circuit to deposit copper,

wherein copper is electrodeposited on the seminal conductive layer at an average current density between about 1 and about 25 amps/dm^2 integrated over the metalizing substrate.

18. A process as set forth in claim 1, wherein the epihalohydrin comprises epichlorohydrin.

19. A process as set forth in claim 6, wherein the polymeric moiety of structure (I) is bonded to a residual hydroxyl oxygen of an alcohol.