4. The electrodepositable coating composition according to claim 1, wherein (a) comprises an acrylic resin, a polyester resin, a polyamide, a polyurethane resin, epoxy resin, or a combination thereof.

5. The electrodepositable coating composition according to claim 4, wherein the electrodepositable coating composition further comprises a crosslinking agent, said crosslinking agent comprising a non-aromatic blocked polyisocyanate.

6. The electrodepositable coating composition according to claim 1, wherein (b) comprises < 5 weight % of the weight of total resin solids of the electrodepositable coating composition.

7. The electrodepositable coating composition according to claim 1, wherein (b) comprises 1 weight % to 2 weight % of the weight of total resin solids of the electrodepositable coating composition.

~~8. The electrodepositable coating composition of claim 1, wherein the (b) additive is the reaction product of: (i) a formaldehyde compound, (ii) melamine, (iii) an alcohol, and (iv) an ether compound.~~

~~9~~8. The electrodepositable coating composition of claim 1, wherein after application to a substrate and after curing, the cured coating demonstrates improved adhesion to a topcoat relative to a cured electrodeposited coating that does not comprise the (b) compound.

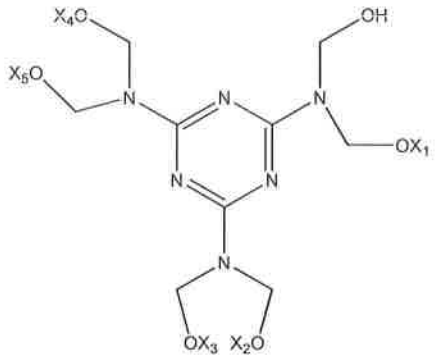
~~10~~9. A substrate coated at least in part with the electrodepositable coating composition of claim 1.

~~11~~10. The substrate according to claim ~~10~~9, wherein at least a portion of the electrodepositable coating composition is coated with another coating composition.

~~12~~11. A method for making an electrodepositable coating composition comprising:

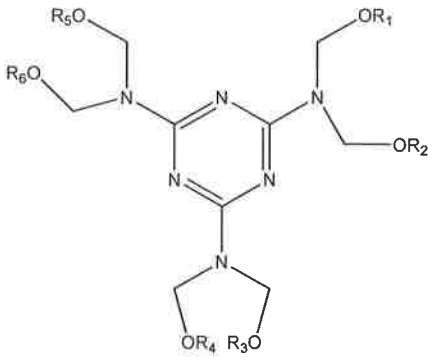
reacting an alcohol with a compound having the following structure:

(IV)



wherein one or more of X_1, X_2, X_3, X_4 and X_5 comprises a chain of ≥ 4 carbons, and wherein each of X_1, X_2, X_3, X_4 and X_5 is the same or different, to produce a compound having the following structure:.

(I)



wherein R_1, R_2, R_3, R_4, R_5, and R_6 comprises $-(C(R^I)HCH_2O)_m-R^{II}$; wherein m is 0, 1, 2, or 3, R^I is H or has 1 to 6 carbon atoms, and R^{II} has 4 to 18 carbon atoms or $CH_2-CH_2-Y-R^{IV}$ wherein Y comprises O, S, or $C(O)NR^{III}$, wherein R^{III} is H or has 1 to 6 carbon atoms and R^{IV} is H or has 1 to 18 carbon atoms; and wherein at least one of R_1, R_2, R_3, R_4, R_5, and R_6 comprises: H as R^I, R^{II} has 4 carbon atoms, and m = 1, 2, or 3; and wherein at least one of R_1, R_2, R_3, R_4, R_5, and R_6 comprises: H as R^I, R^{II} has 4 carbon atoms, and m = 0; and

combining the compound with a cationic salt group containing resin to produce the electrodepositable coating composition.

~~13~~12. The method according to claim ~~12~~11, wherein each of X_1, X_2, X_3, X_4 and X_5 comprises a chain of ≥ 4 carbons.

~~14~~13. The method according to claim ~~12~~11, wherein the alcohol comprises glycol ether, butanol, hexanol, 2-ethylhexanol, or combinations thereof.

~~15~~14. The method according to claim ~~12~~11, wherein the cationic salt group containing resin comprises an acrylic resin, a polyester resin, a polyamide, a polyurethane resin, or combinations thereof.

~~16~~15. The method according to claim ~~12~~11, wherein the coating composition further comprises a crosslinking agent, said crosslinking agent comprising a non-aromatic blocked polyisocyanate.