What is claimed is:

1. A curable composition comprising a benzoxazine, an epoxy compound and an amine compound of the formula:

$R^{10}(NHR^9)_m$,

wherein

R^{10} is a polymeric polyoxyalkylene;

each R^9 is independently H or a hydrocarbyl group, including aryl and alkyl, and m is 1 to 6.

2. The curable composition of claim 1, wherein at least one of said epoxy compound and amine compound is polyfunctional.

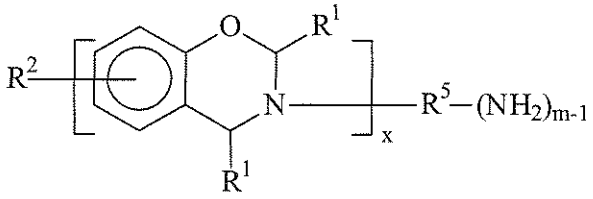
~~3. The curable composition of claim 1 wherein said epoxy compound is a polyepoxy compound.~~

~~4. The curable composition of claim 1 wherein said amine compound is a polyamine.~~

~~5. The curable composition of claim 1 comprising a polyepoxy and polyamine.~~

~~6~~3. The curable composition of claim 1 wherein the benzoxazine is a polybenzoxazine.

~~7~~4. The curable composition of claim ~~6~~3 wherein the polybenzoxazine is of the formula:



, wherein

each of R^1 is H or an alkyl group;

R^2 is H, a covalent bond, or a polyvalent (hetero)hydrocarbyl group;

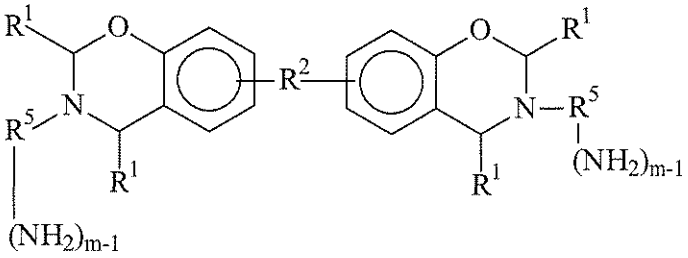
R^5 is the (hetero)hydrocarbyl residue of a primary amino compound having a valence of x,

m is 2-4; and

x is at least 1.

~~85~~. The curable composition of claim ~~74~~ wherein R^5 is a poly(alkyleneoxy) group.

~~96~~. The curable composition of claim ~~63~~ wherein the polbenzoxazine compound is of the formula:



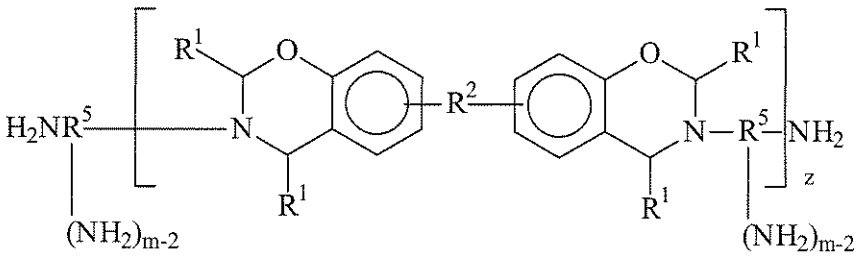
each of R^1 is H or an alkyl group;

R^2 is H, a covalent bond, or a divalent (hetero)hydrocarbyl group;

m is 2-4

R^5 is the (hetero)hydrocarbyl group.

~~107~~. The curable composition of claim ~~63~~ wherein the polybenzoxazine compound is of the formula:



wherein,

each of R^1 is H or an alkyl group;

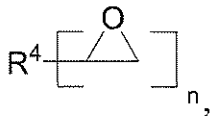
R^2 is a covalent bond, or a divalent (hetero)hydrocarbyl group;

m is 2-4;

z is at least 2;

R^5 is the divalent (hetero)hydrocarbyl residue of a primary diamino compound.

~~11~~8. The curable composition of claim 2 wherein the epoxy compound is of the formula

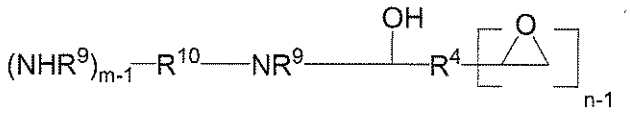


where R^4 is an (hetero)hydrocarbyl having a valence of n, and n is 1 to 6.

~~12. The curable composition of claim 10 wherein R^4 is a non-polymeric aliphatic, cycloaliphatic, aromatic or alkyl-substituted aromatic moiety having from 1 to 30 carbon atoms and optionally 1 to four catenary heteroatoms of oxygen, nitrogen or sulfur.~~

~~13. The curable composition of claim 12 wherein the R^4 is a glycidyl group.~~

~~14~~9. The curable composition of claim 1, wherein the reaction product of the epoxy compound with the amine compound is of the formula



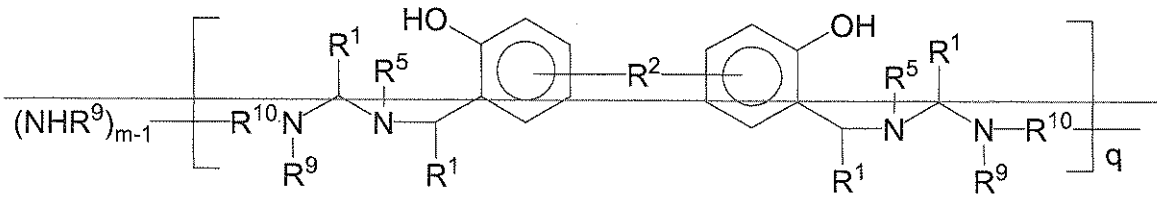
where R^4 is an (hetero)hydrocarbyl having a valence of n, and n is 1 to 6

R^9 is H or a hydrocarbyl group, including aryl and alkyl;

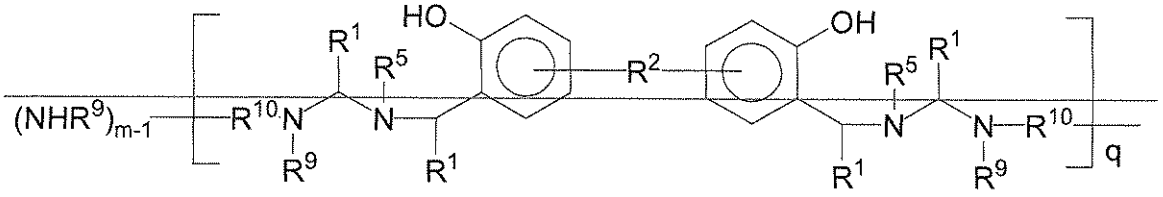
R^{10} is a polymeric polyoxyalkylene, and

m is 1 to 6.

~~15. The curable composition of claim 1, wherein the reaction product of the benzoxazine with the amine compound is of the formula:~~



~~or~~



~~wherein~~

~~each R^1 is H or an alkyl group, and is the residue of an aliphatic aldehyde,~~

~~R^2 is H, a covalent bond, or a polyvalent (hetero)hydrocarbyl group, preferably H, a covalent bond or a divalent alkyl group;~~

~~R^5 is the (hetero)hydrocarbyl residue of a primary amino compound~~

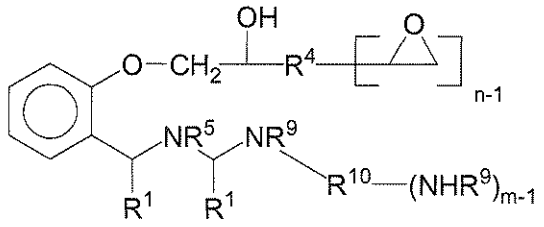
~~R^{10} is a polymeric polyoxyalkylene, and~~

~~R^9 is H or a hydrocarbyl group, including aryl and alkyl, and~~

~~m is 1 to 6~~

~~q is at least 1.~~

~~16~~10. The curable composition of claim 1, wherein the amine/benzoxazine/epoxy adduct is of the formula:



II

wherein

each R^1 is H or an alkyl group, and is the residue of an aliphatic aldehyde,

R^5 is the (hetero)hydrocarbyl residue of a primary amino compound, which may be a mono- or polyamine

R^{10} is a polymeric polyoxyalkylene, and

R^9 is H or a hydrocarbyl group, including aryl and alkyl,

n is 1 to 6;

m is 1 to 6.

~~17~~11. The composition of claim 1, wherein the molar ratio of amine groups to the sum of the epoxy groups and the benzoxazine groups is from 2:1 to 1:10.

~~18~~12. The composition of claim 1, wherein the molar ratio of amine groups to the sum of the epoxy groups and the benzoxazine groups is from 1:1 to 1:2.

~~19~~13. The composition of claim 1 wherein the ratio of epoxy equivalents to benzoxazine equivalents in the composition is from 50:1 to 1:5.