Claims

1. A resin composition comprising:
   styrene maleic anhydride co-polymer;
   at least one epoxy resin;
   at least one cross-linking agent;
   talc; and
   silica.

2. The resin composition of claim 1 wherein the talc is present in the resin composition in an amount ranging from 2.5 to 15 wt% on a dry basis.

3. The resin composition of any one of claims 1-2 wherein the silica is present in the resin composition in an amount ranging from 2.5 to 25 wt% on a dry basis.

4. The resin composition of any one of claims 1-3 wherein the silica is fused silica.

5. The resin composition of any one of claims 1-4 wherein the silica is a silated silica.

6. The resin composition of any one of claim 1-5 wherein the talc is a silated talc.

7. The resin composition of any one of claims 1-6 including from 5 to 12.5 wt% of talc and from 5 to 25 wt% of silated fused silica each on a dry basis.

8. The resin composition of any one of claims 1-7 wherein the styrene maleic anhydride co-polymer is present in the resin composition in an amount ranging from 5 to 40 wt% on a dry basis.

9. The resin composition of any one of claims 1-8 wherein the at least one epoxy resin is present in the resin composition in an amount ranging from 10 to 50 wt% on a dry basis.

10. The resin composition of any one of claims 1-9 wherein the at least one epoxy resin is selected from a brominated bisphenol A, a brominated bisphenol F, a non-brominated bisphenol A, a non-brominated bisphenol F and combinations thereof.

11. The resin composition of any one of claims 1-10 wherein the at least one cross-linking agent is present in the resin composition in an amount ranging from greater than 0 to 20 wt% on a dry basis.

12. The resin composition of any one of claims 1-11 wherein the at least one cross-linking agent is selected from tetrabromobisphenol A, tetra-DOPO-bisphenol A and a mixture thereof.

13. The resin composition of any one of claims 1-12 including from 0.01 to 3.0 wt% on a dry basis of at least one azo-type catalyst.

14. The resin composition of any one of claims 1-13 including a catalyst selected from azobisisobutyronitrile, 2-propyl imidiazole, tetrabutylphophonium acid acetate, 2-methylimidazole and combinations thereof.

15. A resin composition comprising:

from 5 to 40 wt% on a dry solvent free resin composition basis of a styrene maleic anhydride co-polymer;

from 10 to 50 wt% on a dry solvent free resin composition basis of at least one epoxy resin is selected from a brominated bisphenol A, a brominated bisphenol F, a non-brominated bisphenol A, a non-brominated

bisphenol F and combinations thereof;

from greater than 0 to 20 wt% on a dry solvent free resin composition basis of at least one cross-linking agent is selected from tetrabromobisphenol A, tetra-DOPO-bisphenol A and mixtures thereof;

from 2.5 to 15 wt% talc; and

from 2.5 to 15 wt% fumed silica.

16. The resin composition of claim 15 wherein the weight ratio of fumed silica to talc ranges from 1:2.5 to 5:1.

17. The resin composition of claim 15 wherein the weight ratio of fumed silica to talc ranges from 1:1 to 2.5:1.

18. The resin composition of claim 15 wherein the fumed silica is an amorphous silated fumed silica.

19. The resin composition of claim 15 wherein the talc is silated talc.

20. The resin composition of claim 15 wherein the cross-linking agent is a mixture of tetrabromobisphenol A and tetra-DOPO-bisphenol A.

21. The resin composition of claim 15 comprising tetrabutylphosphonium acid acetate as the catalyst.

22. A prepreg including a reinforcing material impregnated with the resin composition of any of claims 1-21.

23. The prepreg of claim 22 wherein the prepreg is incorporated into a printed circuit board and wherein the printed circuit board does not undergo delamination in the area of the prepreg.

24. A laminate including a reinforcing material and the resin composition of any of claims 1-21 wherein the resin composition is C-staged.

25. A resin coated copper foil comprising a copper foil sheet having a first planar

surface and a second planar surface wherein a layer of resin composition of any of claims 1-21 is applied to at least one of the planar surfaces and wherein the resin composition is B-staged or C-staged.