CLAIMS

1. A prepreg comprising a b-staged varnish composition including:

30-60 parts by weight of a multi-functional epoxy wherein the multi-functional resin is not an eight-functional bisphenol-A novolac epoxy resin;

80-150 parts by weight of an eight-functional bisphenol-A novolac epoxy resin;

30-60 parts by weight of a bifunctional epoxy resin;

20-50 parts by weight of a hardener selected from 4,4'diaminodiphenylsulfone, 3,3'-diaminodiphenylsulfone and mixtures thereof; and

10-70 parts by weight of a flame retardant wherein the prepreg is capable of being c-staged to a composite having a DMA Tg in excess of 280°C. and a T288 time in excess of 20 minutes.

2. The prepreg of claim 1 wherein the multifunctional epoxy resin and the eight functional bisphenol-A novolac epoxy resin are present in the varnish at a weight ratio ranging from about 1:1.8 to about 1:2.0.

3. The prepreg of claim 1 wherein the hardener is 4,4'-diaminophenylsulfone.

4. The prepreg of claim 1 wherein the at least one flame retardant is decabromodiphenylethane.

5. A printed circuit board including at least one layer that is a c-staged prepreg of claim 1.

6. A prepreg comprising a b-staged varnish composition including:

30-60 parts by weight of a multi-functional epoxy resin wherein the multi-functional resin is not an eight-functional bisphenol-A novolac epoxy resin;

80-150 parts by weight of an eight-functional bisphenol-A novolac epoxy resin; 30-60 parts by weight of a bifunctional epoxy resin;

20-50 parts by weight of a hardener selected from 4,4'-diaminodiphenylsulfone, 3,3'-diaminodiphenylsulfone and mixtures thereof;

10-70 parts by weight of a flame retardant;

0-50 parts of a filler;

0-5 parts of a rubber; and

0-5 parts of a Lewis acid wherein the prepreg is capable of being c-staged to a composite having a DMA Tg in excess of 280°C. and a T288 time in excess of 20 minutes.