Summary of the Invention

In an ~~embodiment~~ aspect of the present invention, there is disclosed a masterblend comprising, consisting of, or consisting essentially of a) a solvent; and b) a core shell rubber wherein the masterblend does not contain a thermosetting resin.

In another ~~embodiment~~ aspect of the present invention, there is disclosed a process comprising, consisting of, or consisting essentially of a) dispersing a core/shell rubber in a solvent to form a masterblend; and b) admixing the masterblend with a thermosetting resin to form a curable composition.

Another aspect relates to a varnish prepared from the masterblend disclosed herein.

Another aspect relates to a prepreg prepared from the varnish disclosed herein.

Another aspect relates to an electrical laminate prepared from the varnish disclosed herein.

Another aspect relates to a printed circuit board prepared from the varnish disclosed herein.

Another aspect relates to a coating prepared from the varnish disclosed herein.

Another aspect relates to a composite prepared from the varnish disclosed herein.

Another aspect relates to a casting prepared from the varnish disclosed herein.

Another aspect relates to an adhesive prepared from the varnish disclosed herein.

Detailed Description

In an embodiment of the invention, there is disclosed a masterblend comprising, consisting of, or consisting essentially of a) a solvent; and b) a core shell rubber.

Solvent

Any solvent suitable for laminate formulations can be used. Non-limiting examples of suitable solvents include ketones, alcohols, water, glycol ethers, aromatic hydrocarbons and mixtures thereof. Preferred solvents include but are not limited to methyl ethyl ketone, acetone, Dowanol™ PM (mixture of 1-hydroxy-2-methoxypropane and 1-methoxy-2-hydroxypropane), cyclohexanone, Dowanol™ PMA (mixture of 1-acetoxy-2-methoxypropane and 1-methoxy-2-acetoxypropane), dimethylformamide (DMF), methyl isobutyl ketone (MIBK), xylene, toluene, methanol, and butanol. Combinations of any two or more solvents can also be used.

Core Shell Rubber

Generally the core shell rubber has a styrene butadiene core and/or a methyl methacrylate shell. In an embodiment, the core does not swell in the solvent.

Examples of core shell rubbers that can be used include, but are not limited to those in which the shell is methyl methacrylate, methyl methacrylate/ethyl acrylate, styrene/acrylonitrile, methyl methacrylate/ethyl acrylate/styrene, and the core is butadiene, butadiene/styrene, butyl acrylate, and combinations of any two or more thereof.

In an embodiment, the masterblend comprises from 5 weight percent to 40 weight percent, core shell rubber, based on the total weight of the masterblend. The masterblend comprises in the range of from 10 weight percent to 30 weight percent core shell rubber in another embodiment, and from 15 weight percent to 30 weight percent in yet another embodiment. In yet another embodiment, the masterblend comprises about 30 weight percent core shell rubber.

In another embodiment of the invention, there is disclosed a process comprising, consisting of, or consisting essentially of: a) dispersing a core shell rubber in a solvent in a