CLAIMS

1. A method of forming a coating on a copper wire or strip for electric insulation, the coating comprising:

applying the coating onto the copper wire or strip, wherein the coating consists of a layer of Al_2O_3 sandwiched between a first silica film and a second silica film, each of the first silica film and the second silica film produced by curing a mixture comprising polysilazane and perhydropolysilazanes and has a thickness of 1-2µm.

2. The method of claim 1, wherein applying the coating comprises forming the first silica film onto the copper wire or strip, depositing the layer of Al_2O_3 onto the first silica film and forming the second silica film onto the layer of Al_2O_3.

3. The method of claim 2, wherein the first silica film is cured before applying the layer of Al_2O_3.

4. The method of claim 3, wherein the first silica film is cured for at least 6 hours.

5. The method of any one of claims 2 to 4, wherein the second silica film is cured for at least 6 hours.

6. The method of any one of claims 2 to 5, wherein the first silica film and the second silica film are cured at normal room temperature or at elevated temperature.

7. The method of any one of claims 2 to 6, wherein forming the first silica film and the second silica film comprises dipping the copper wire or strip into or wiping the copper wire or strip with the mixture of polysilazane, perhydropolysilazanes and solvent.

8. The method of any one of claims 2 to 7, wherein the layer of Al_2O_3 is deposited using atomic layer deposition method.

9. An electrically insulated copper wire or strip comprising a coating on the copper wire or strip, wherein the coating consists of a layer of Al_2O_3 sandwiched between a first silica film and a second silica film, each of the first silica film and the second silica film produced by curing a mixture comprising polysilazane and perhydropolysilazanes and has a thickness of 1-2µm.