CLAIMS

1. A non-aqueous cleaning composition for micro-electronics applications consisting essentially of:

about 0.2% to about 1.5% by weight of a fluoride activating agent, wherein said fluoride activating agent is hydrogen fluoride, Fluoroboric acid, or a combination of hydrogen fluoride and Fluoroboric acid,

about 1.0% to about 2.8% by weight of at least one oxidizer, wherein said one oxidizer is nitric acid or a combination of nitric acid and sulfuric acid, and

about 93.2% to about 98.8% by weight of an anhydrous organic solvent, wherein said anhydrous organic solvent is sulfolane,

wherein said cleaning composition has a pH equal to 5.5 or less, and wherein said composition is in the absence of hydrogen peroxide.

2. The non-aqueous cleaning composition according to claim 1 wherein said cleaning composition also has etch capabilities.

3. The non-aqueous cleaning composition according to claim 1 wherein said cleaning composition is compatible with tungsten and low-κ dielectric substrates.

4. A method of cleaning a mirco-electronic substrate comprising contacting said micro-electronic substrate with a cleaning composition consisting essentially of:

about 0.2% to about 1.5% by weight of a fluoride activating agent, wherein said fluoride activating agent is hydrogen fluoride, Fluoroboric acid, or a combination of hydrogen fluoride and Fluoroboric acid,

about 1.0% to about 2.8% by weight of at least one oxidizer, wherein said one oxidizer is nitric acid or a combination of nitric acid and sulfuric, and

about 93.2% to about 98.8% by weight of an anhydrous organic solvent, wherein said anhydrous organic solvent is sulfolane,

wherein said cleaning composition has a pH equal to 5.5 or less, and wherein said composition is in the absence of hydrogen peroxide.