

ABSTRACT

CLEANING FORMULATIONS

A composition and method for removing copper-containing post-etch and/or post-ash residue from patterned microelectronic devices is described. The removal
5 composition includes water, a water-miscible organic solvent, an amine compound, an organic acid, and a fluoride ion source. The compositions effectively remove the copper-containing post-etch residue from the microelectronic device without damaging exposed low-k dielectric and metal interconnect materials.

10 (No figure to accompany abstract)