

Abstract

OXIDIZING AQUEOUS CLEANER FOR THE REMOVAL OF POST-ETCH RESIDUES

An oxidizing aqueous cleaning composition and process for cleaning post-plasma etch residue and/or hardmask material from a microelectronic device having said residue thereon. The oxidizing aqueous cleaning composition includes at least one oxidizing agent, at least one oxidizing agent stabilizer comprising an amine species selected from the group consisting of primary amines, secondary amines, tertiary amines and amine-N-oxides, optionally at least one co-solvent, optionally at least one metal-chelating agent, optionally at least one buffering species, and water. The composition achieves highly efficacious cleaning of the residue material from the microelectronic device while simultaneously not damaging the interlevel dielectric and metal interconnect material also present thereon.

Figures 1A & 1B