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(54) REMOVAL OF SILICA BASED ETCH RESIDUE USING AQUEOUS CHEMISTRY

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(57) **ABSTRACT**

Removal of silica-based etch residue is effected by use of an aqueous chemistry which eliminates hazard concerns in connection with electronic component fabrication tooling. The system employs a formulated product comprising a controlled level of ionized fluorine in a citrate buffer containing a dual surfactant system for etch residue penetration and rinsing. The combined system is proven to be ideal for Si-based etch residue dissolution and removal. The Si-residue removal rates have been characterized at specific buffered pH values and normal process conditions at times between 45 sec. to 3 min., and with those described being effectual at times of the order of 45 sec. or less when processed in a single-wafer tool. The product simplifies and reduces cost time and materials.