

ABSTRACT

STOP-ON SILICON CONTAINING LAYER ADDITIVE

Chemical mechanical polishing (CMP) compositions, methods and systems are for polishing patterned semiconductor wafers. The CMP compositions comprising an
5 abrasive and a water soluble aluminum compound additive with a pH >7 suppress CMP stop layer (a silicon containing layer, such as silicon nitride, silicon oxide, or silicon carbide) removal rate. CMP compositions optionally contain surfactant to help wet surface; a corrosion inhibitor to provide corrosion inhibition on metal lines, vias, or trenches; and a pH adjusting agent that is used to adjust pH of the CMP polishing
10 composition.

(No drawing to be published)