

ABSTRACT

METHODS AND SOLUTIONS FOR PREVENTING THE FORMATION OF METAL PARTICULATE DEFECT MATTER UPON A SUBSTRATE AFTER A PLATING PROCESS

Methods and solutions for preventing the formation of metal particulate defect matter upon a substrate after plating processes are provided. In particular, solutions are provided which are free of oxidizing agents and include a non-metal pH adjusting agent in sufficient concentration such that the solution has a pH between approximately 7.5 and approximately 12.0. In some cases, a solution may include a chelating agent. In addition or alternatively, a solution may include at least two different types of complexing agents each offering a single point of attachment for binding metal ions via respectively different functional groups. In any case, at least one of the complexing agents or the chelating agent includes a non-amine or non-imine functional group. An embodiment of a method for processing a substrate includes plating a metal layer upon the substrate and subsequently exposing the substrate to a solution comprising the aforementioned make-up.

FIG. 1