

ABSTRACT

"Method and Composition for Bright Electroless Nickel Deposition"

An aqueous plating solution for use in depositing an electroless nickel coating on a substrate contains : a source of nickel ions; a reducing agent; and an anti-pitting agent in the form of a water-soluble styrenic compound corresponding to the formula : $\text{CH}_2=\text{CH}-\text{C}_6\text{H}_4\text{Z}$ with Z being a hydrophilic group. The group Z may be one of the polar chemical groups consisting of: sulphonate; ethylene glycol oligomer; carboxylate; quaternary ammonium; primary amide; or phosphate.

A corresponding method of depositing an electroless nickel coating on a substrate surface comprises the steps of at least partially immersing the substrate in a plating solution in accordance with the invention, maintaining the plating solution at a temperature of from 85°C to 95°C and maintaining the solution at a pH of from 4.5 to 5.5.