

Title (en)
SYSTEM FOR NICKEL-FREE ZINC PHOSPHATE PRETREATMENT

Title (de)
SYSTEM ZUR NICKELFREIEN ZINKPHOSPHATVORBEHANDLUNG

Title (fr)
SYSTÈME DE PRÉTRAITEMENT DE PHOSPHATE DE ZINC SANS NICKEL

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Application
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Abstract (en)
Disclosed is a substrate pretreatment system, comprising (a) an activating rinse for treating at least a portion of a substrate comprising a dispersion of metal phosphate particles having a D_{90} particle size of no greater than 10 μm , wherein the metal phosphate comprises divalent or trivalent metals or combinations thereof; and (b) a pretreatment composition for treating at least a portion of the substrate treated with the activating rinse, comprising zinc ions and phosphate ions, wherein the pretreatment composition is substantially free of nickel. Methods of treating a substrate with the substrate pretreatment system also are disclosed. Substrates treated with the substrate pretreatment system also are disclosed.

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