

Publication

EP 0675972 A4 19951102

Application

EP 94904428 A 19931215

Priority

- US 99546592 A 19921222
- US 9312044 W 19931215

Abstract (en)

[origin: WO9414999A1] The nickel in conventional low zinc and nickel containing phosphate conversion coating compositions can be replaced by substantially smaller concentrations of cupric ions without losing the benefits of quality that motivated the addition of nickel to low zinc phosphating compositions originally; in fact, better alkaline resistance and paint adhesion can be achieved, along with a substantial cost reduction.

IPC 1-7

C23C 22/12

IPC 8 full level

C23C 22/12 (2006.01); **C23C 22/13** (2006.01); **C23C 22/18** (2006.01); **C23C 22/36** (2006.01)

CPC (source: EP)

C23C 22/12 (2013.01); **C23C 22/13** (2013.01); **C23C 22/186** (2013.01); **C23C 22/362** (2013.01); **C23C 22/368** (2013.01)

Citation (search report)

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Designated contracting state (EPC)

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WO 9414999 A1 19940707; AT E183247 T1 19990815; AU 5848194 A 19940719; BR 9307702 A 19990831; CA 2150545 A1 19940707; CN 1090606 A 19940810; CN 1092245 C 20021009; CZ 164995 A3 19960117; CZ 287997 B6 20010314; DE 69326021 D1 19990916; DE 69326021 T2 19991223; EP 0675972 A1 19951011; EP 0675972 A4 19951102; EP 0675972 B1 19990811; ES 2136726 T3 19991201; JP H08504890 A 19960528; PL 309404 A1 19951002; SG 55084 A1 19981221; ZA 939636 B 19940815

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US 9312044 W 19931215; AT 94904428 T 19931215; AU 5848194 A 19931215; BR 9307702 A 19931215; CA 2150545 A 19931215; CN 93119949 A 19931222; CZ 164995 A 19931215; DE 69326021 T 19931215; EP 94904428 A 19931215; ES 94904428 T 19931215; JP 51522794 A 19931215; PL 30940493 A 19931215; SG 1996005336 A 19931215; ZA 939636 A 19931222