

Title (en)

DEPOSITION OF COPPER-TIN AND COPPER-TIN-ZINC ALLOYS FROM AN ELECTROLYTE

Title (de)

ABSCHIEDUNG VON KUPFER-ZINN- UND KUPFER-ZINN-ZINK-LEGIERUNGEN AUS EINEM ELEKTROLYT

Title (fr)

DÉPÔT D'ALLIAGES CUIVRE-ÉTAIN ET CUIVRE-ÉTAIN-ZINC À PARTIR D'UN ÉLECTROLYTE

Publication

**EP 3084042 B1 20181107 (EN)**

Application

**EP 14818924 A 20141211**

Priority

- DE 102013226297 A 20131217
- EP 2014077372 W 20141211

Abstract (en)

[origin: WO2015091201A1] The present invention relates to a cyanide-free electrolyte which contains a phosphate and aliphatic or aromatic thio compounds and also to a process for the electrolytic deposition of an alloy of the elements copper and tin and optionally zinc. The electrolyte and the process are characterized in that stannate ions and copper ions and optionally zinc (II) ions and also aliphatic and/or aromatic thio compounds are present in the electrolyte used. The electrolyte can optionally additionally contain carboxylic acids, wetting agents and/or brighteners. The present invention further provides a process for the electrolytic deposition of alloys of copper, tin and optionally zinc on consumer goods and decorative goods using the electrolyte of the invention.

IPC 8 full level

**C25D 3/58** (2006.01); **C25D 3/60** (2006.01)

CPC (source: EP KR US)

**C25D 3/58** (2013.01 - EP KR US); **C25D 3/60** (2013.01 - EP KR US); **C25D 17/10** (2013.01 - EP US)

Citation (examination)

WO 2010003621 A1 20100114 - UMICORE GALVANOTECHNIK GMBH [DE], et al

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**DE 102013226297 B3 20150326**; CN 105829583 A 20160803; CN 105829583 B 20190205; EP 3084042 A1 20161026; EP 3084042 B1 20181107; JP 2016540893 A 20161228; KR 20160100364 A 20160823; US 2016348259 A1 20161201; WO 2015091201 A1 20150625

DOCDB simple family (application)

**DE 102013226297 A 20131217**; CN 201480068447 A 20141211; EP 14818924 A 20141211; EP 2014077372 W 20141211; JP 2016537456 A 20141211; KR 20167019347 A 20141211; US 201415102051 A 20141211