

Title (en)
LEAD-FREE CU-ZN BASE ALLOY

Title (de)
BLEIFREIE CU-ZN-BASISLEGIERUNG

Title (fr)
ALLIAGE À BASE DE CU-ZN SANS PLOMB

Publication
EP 3992317 A1 20220504 (DE)

Application
EP 20204604 A 20201029

Priority
EP 20204604 A 20201029

Abstract (en)
[origin: CN114427050A] The present application relates to a lead-free Cu-Zn-based alloy having the following composition (data in% by weight): Cu: 58-64% Fe: 0.4-1.4% Mn: 0.4-2.3% Ni: 1.5-3.5% Al: 0.1-4.4% Si: 0.5-1.8%, an alloy composition that promotes chip breaking: Sn: 0.65-1.2%, in which P participates in the construction of the alloy and exactly at a maximum of 0.025% or P 0.03-0.1%, in which a maximum of 0.25% Sn is permitted to participate, and the balance of Cu and unavoidable impurities. -the balance Zn plus unavoidable impurities, allowing 0.05% per element, where the sum of the unavoidable impurities does not exceed 0.15%,-lead: up to 0.1%, where up to 0.035% Cr is allowed,-the balance being Zn plus unavoidable impurities, where the sum of the unavoidable impurities does not exceed 0.15%.

Abstract (de)
Beschrieben ist eine bleifreie Cu-Zn-Basislegierung bestehend aus (Angaben in Gew.-%):- Cu: 58 - 64 %- Fe: 0,4 - 1,4 %- Mn: 0,4 - 2,3 %- Ni: 1,5 - 3,5 %- Al: 0,1 - 4,4 %- Si: 0,5 - 1,8 %- als Spanbruch begünstigender Legierungsbestandteil: Sn 0,65- 1,2 % und/oder P 0,03 - 0,1 %- Rest Zn nebst unvermeidbaren Verunreinigungen,- Pb: max. 0,1 %,- wobei die nachfolgenden Elemente, wenn nicht obligatorischer Legierungsbestandteil, in den angegebenen Gehalten toleriert werden:Sn mit max. 0,25 %,P mit max. 0,025 % undCr mit max. 0,035 %.

IPC 8 full level
C22C 9/04 (2006.01)

CPC (source: CN EP KR US); **C22C 9/04** (2013.01 - CN EP KR US); **C22F 1/08** (2013.01 - KR)

Citation (applicant)
EP 3690069 A1 20200805 - POONGSAN CORP [KR]

Citation (search report)
• [IA] JP S56127741 A 19811006 - HONDA MOTOR CO LTD, et al
• [YA] WO 2015117972 A2 20150813 - OTTO FUCHS KOMMANDITGESELLSCHAFT [DE]
• [YA] DE 102017007138 B3 20180927 - WIELAND WERKE AG [DE]
• [A] DE 102007029991 A1 20090102 - WIELAND WERKE AG [DE]

Cited by
EP4289980A1

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3992317 A1 20220504; BR 102021020590 A2 20220510; CN 114427050 A 20220503; JP 2022074111 A 20220517; KR 20220057454 A 20220509; US 2022136085 A1 20220505

DOCDB simple family (application)
EP 20204604 A 20201029; BR 102021020590 A 20211014; CN 202111245687 A 20211026; JP 2021177363 A 20211029; KR 20210144953 A 20211027; US 202117499203 A 20211012