

Title (en)  
LEAD AND ANTIMONY-FREE BRASS ALLOY

Title (de)  
BLEI- UND ANTIMONFREIE MESSINGLEGIERUNG

Title (fr)  
ALLIAGE DE LAITON SANS PLOMB ET ANTIMOINE

Publication  
**EP 4124667 A1 20230201 (DE)**

Application  
**EP 22184790 A 20220713**

Priority  
DE 102021119474 A 20210727

Abstract (en)  
[origin: MX2022009224A] The invention relates to a lead- and antimony-free brass alloy containing 56 to 66% Cu, 0.1 to 1.5% Mg, less than 0.1% Pb, balance Zn and also unavoidable impurities. Figure 4 Fig. 3 d Cbl 5mm Fig. 4 5mm.

Abstract (de)  
Die Erfindung betrifft eine Blei- und Antimonfreie Messinglegierung, enthaltend 56 bis 66% Cu, 0,1 bis 1,5% Mg, weniger als 0,1% Pb, Rest Zn sowie unvermeidbare Verunreinigungen.

IPC 8 full level  
**C22C 9/04** (2006.01)

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

Citation (applicant)  

- EP 3320122 B1 20200812 - AURUBIS STOLBERG GMBH & CO KG [DE]
- EP 2913415 A1 20150902 - JIAXING IDC PLUMBING & HEATING TECHNOLOGY LTD [CN], et al
- EP 2467507 B1 20190227 - AURUBIS STOLBERG GMBH & CO KG [DE]
- EP 2133437 B1 20110615 - XIAMEN LOTA INT CO LTD [CN]

Citation (search report)  

- [X] CN 101161836 A 20080416 - UNIV CENTRAL SOUTH [CN]
- [X] JP H08176707 A 19960709 - SUMITOMO ELECTRIC INDUSTRIES
- [X] JP H06179932 A 19940628 - NIKKO KINZOKU KK
- [X] LEE DONG-BOK ET AL: "The effect of small additions of Zr, Cr, Mg, Al, and Si on the oxidation of 6:4 brass", METALS AND MATERIALS INTERNATIONAL, vol. 8, no. 3, 31 May 2002 (2002-05-31), Seoul, pages 327 - 332, XP093005172, ISSN: 1598-9623, Retrieved from the Internet <URL:https://link.springer.com/content/pdf/10.1007/BF03186103.pdf> DOI: 10.1007/BF03186103
- [X] HARUHIKO ATSUMI ET AL: "Fabrication and properties of high-strength extruded brass using elemental mixture of Cu40% Zn alloy powder and Mg particle", MATERIALS CHEMISTRY AND PHYSICS, ELSEVIER SA, SWITZERLAND, TAIWAN, REPUBLIC OF CHINA, vol. 135, no. 2, 6 May 2012 (2012-05-06), pages 554 - 562, XP028414791, ISSN: 0254-0584, [retrieved on 20120512], DOI: 10.1016/J.MATCHEMPHYS.2012.05.025
- [X] ADINEH MORTEZA ET AL: "Microstructure, mechanical properties and machinability of Cu-Zn-Mg and Cu-Zn-Sb brass alloys", MATERIALS SCIENCE AND TECHNOLOGY, vol. 35, no. 12, 19 June 2019 (2019-06-19), GB, pages 1504 - 1514, XP093005147, ISSN: 0267-0836, Retrieved from the Internet <URL:https://www.tandfonline.com/doi/pdf/10.1080/02670836.2019.1630089?needAccess=true> DOI: 10.1080/02670836.2019.1630089

Citation (third parties)  
Third party : Anonymous  

- CN 101161836 A 20080416 - UNIV CENTRAL SOUTH [CN]
- WO 2020261603 A1 20201230 - MITSUBISHI MATERIALS CORP [JP]
- EP 3872198 A1 20210901 - MITSUBISHI MATERIALS CORP [JP]

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

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4124667 A1 20230201**; AU 202209210 A1 20230216; BR 102022014247 A2 20230207; CN 115679151 A 20230203; DE 102021119474 A1 20230202; IL 295024 A 20230201; JP 2023021941 A 20230214; KR 20230017150 A 20230203; MX 2022009224 A 20230130; US 2023035864 A1 20230202; ZA 202207823 B 20230426

DOCDB simple family (application)  
**EP 22184790 A 20220713**; AU 202209210 A 20220725; BR 102022014247 A 20220719; CN 202210881217 A 20220726; DE 102021119474 A 20210727; IL 29502422 A 20220724; JP 2022119059 A 20220726; KR 20220093072 A 20220727; MX 2022009224 A 20220726; US 202217874712 A 20220727; ZA 202207823 A 20220714