

Title (en)  
Lead-free, free-cutting copper alloys

Title (de)  
Bleifreie Automatenkupferlegierung

Title (fr)  
Alliage de cuivre de décolletage sans plomb

Publication  
**EP 1600517 B1 20090218 (EN)**

Application  
**EP 05017191 A 19981116**

Priority  
• EP 98953071 A 19981116  
• JP 28859098 A 19981012

Abstract (en)  
[origin: EP1559802A1] Lead-free copper alloys with industrially satisfactory machinability comprising 69 to 79 percent, by weight, of copper, 2.0 to 4.0 percent, by weight, of silicon, and the remaining percent, by weight, of zinc. <IMAGE>

IPC 8 full level  
**C22C 9/04** (2006.01); **C22F 1/00** (2006.01); **C22F 1/08** (2006.01)

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

Cited by  
DE102012013817A1; WO2012032155A3; EP3985136A1; DE102020127317A1; US8991787B2; US9217521B2; US9441765B2; US9217191B2

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**EP 1559802 A1 20050803; EP 1559802 B1 20140115**; AU 1054199 A 20000501; AU 744335 B2 20020221; CA 2314144 A1 20000420; CA 2314144 C 20060822; DE 69832097 D1 20051201; DE 69832097 T2 20060706; DE 69838115 D1 20070830; DE 69838115 T2 20080410; DE 69839830 D1 20080911; DE 69840585 D1 20090402; EP 1045041 A1 20001018; EP 1045041 A4 20030507; EP 1045041 B1 20051026; EP 1600515 A2 20051130; EP 1600515 A3 20051214; EP 1600515 B1 20080730; EP 1600515 B8 20081015; EP 1600516 A2 20051130; EP 1600516 A3 20051214; EP 1600516 B1 20070718; EP 1600517 A2 20051130; EP 1600517 A3 20051214; EP 1600517 B1 20090218; JP 2000119775 A 20000425; JP 3734372 B2 20060111; KR 100352213 B1 20020912; KR 20010033073 A 20010425; TW 421674 B 20010211; WO 0022182 A1 20000420

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