

Title (en)  
Copper base alloys and terminals using the same

Title (de)  
Legierungen auf Kupferbasis sowie Anschlusselementen

Title (fr)  
Alliages à base de cuivre et bornes les utilisant

Publication  
**EP 0859065 B1 20040512 (EN)**

Application  
**EP 98102539 A 19980213**

Priority  
JP 7259497 A 19970218

Abstract (en)  
[origin: EP0859065A1] A copper base alloy for terminals that is of the Cu-Ni-Sn-P or Cu-Ni-Sn-P-Zn system comprising 0.5-3.0% Ni, 0.5-2.0% Sn, 0.01-0.2% P and optimally 0.01-2.0% Zn, bal. Cu, and that has a tensile strength of at least 500 N/mm<2>, a spring limit of at least 400 N/mm<2>, a stress relaxation of no more than 10%, a conductivity of at least 30 % IACS and a bending workability in terms of the R/t ratio of no more than 2 is provided. Terminals the spring portion or the entire part of which is produced from that copper base alloy, having an initial insertion/extraction force of 1.5 N to 30 N and a resistance of no more than 3 m OMEGA at low voltage and low current as initial performance, with the added characteristics that the terminals will experience not more than 20% stress relaxation are also provided. The alloy is superior to the conventional bronze, phosphor bronze and Cu-Sn-Fe-P alloys for terminals in terms of tensile strength, spring limit, stress relaxation characteristics and conductivity and, hence, the terminals manufactured from those alloys have high performance and reliability than the terminals made of the conventional copper base alloys for terminals.

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IPC 8 full level  
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Cited by  
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