

Title (en)  
ELECTRICAL CONTACT MATERIAL

Title (de)  
ELEKTRISCHES KONTAKTMATERIAL

Title (fr)  
MATÉRIAU POUR CONTACT ÉLECTRIQUE

Publication  
**EP 2413337 A4 20140820 (EN)**

Application  
**EP 10755584 A 20100303**

Priority

- JP 2010001444 W 20100303
- JP 2009071526 A 20090324

Abstract (en)  
[origin: EP2413337A1] Provided are an electrical contact material capable of reducing wear-out rates after breaking tests in an overload test and a short-circuit test of a breaker or the like; and an electrical contact material capable of preventing welding after breaking tests in a short-circuit test of a breaker or the like. The electrical contact material (31) according to one aspect includes 4% by mass or more and 7% by mass or less of graphite, the remainder is composed of silver and an unavoidable impurity, a deflection thereof is greater than or equal to 0.5 mm, a Vickers hardness thereof is greater than or equal to 55, and an oxygen content therein is less than or equal to 100 ppm. It is preferable that the electrical contact material (31) further includes a tungsten carbide. It is preferable that an average particle diameter of the tungsten carbide is greater than or equal to 40 nm and less than or equal to 3 µm and a content of the tungsten carbide is greater than or equal to 2% by mass and less than or equal to 4% by mass. The electrical contact material (31) according to another aspect includes 0.5% by mass or more and 2% by mass or less of graphite, the remainder is composed of silver and an unavoidable impurity, a deflection thereof is greater than or equal to 0.8 mm, a Vickers hardness thereof is greater than or equal to 40, and an oxygen content therein is less than or equal to 100 ppm.

IPC 8 full level  
**H01H 1/023** (2006.01); **C22C 1/05** (2006.01); **C22C 1/10** (2006.01); **C22C 5/06** (2006.01); **C22C 32/00** (2006.01); **H01H 1/0233** (2006.01); **H01H 1/027** (2006.01)

CPC (source: EP)  
**C22C 1/05** (2013.01); **C22C 1/10** (2013.01); **C22C 5/06** (2013.01); **H01H 1/023** (2013.01); **H01H 1/0233** (2013.01); **H01H 1/027** (2013.01)

Citation (search report)

- [Y] JP S637345 A 19880113 - SUMITOMO ELECTRIC INDUSTRIES
- [A] US 4689196 A 19870825 - LEUNG CHI H [US]
- [A] WO 9737363 A1 19971009 - SQUARE D CO [US]
- [XY] DATABASE WPI Section Ch Week 197804, Derwent World Patents Index; Class L03, AN 1978-07321A, XP002726960
- See references of WO 2010109777A1

Cited by  
RU198536U1; EP2586883A4; RU176664U1; EP4328933A1; EP4328934A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**EP 2413337 A1 20120201**; **EP 2413337 A4 20140820**; CN 102362326 A 20120222; CN 102362326 B 20150325; CN 103794385 A 20140514; CN 103794385 B 20160330; JP 4579348 B1 20101110; JP WO2010109777 A1 20120927; WO 2010109777 A1 20100930

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