

Title (en)  
FLAME RETARDANT MAGNESIUM ALLOY WITH EXCELLENT MECHANICAL PROPERTIES, AND PREPARATION METHOD THEREOF

Title (de)  
FEUERFESTE MAGNESIUMLEGIERUNG MIT HERVORRAGENDEN MECHANISCHEN EIGENSCHAFTEN UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
ALLIAGE DE MAGNÉSIUM RETARDATEUR DE FLAMMES PRÉSENTANT D'EXCELLENTE PROPRIÉTÉS MÉCANIQUES ET PROCÉDÉ DE PRÉPARATION DE CELUI-CI

Publication  
**EP 2492365 A2 20120829 (EN)**

Application  
**EP 11830869 A 20111004**

Priority

- KR 20100096709 A 20101005
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- KR 2011007298 W 20111004

Abstract (en)  
A magnesium alloy that has excellent ignition resistance and is excellent in both strength and ductility. The magnesium alloy includes, by weight, 1.0% or greater but less than 7.0% of Al, 0.05% to 2.0% of Ca, 0.05% to 2.0% of Y, greater than 0% but not greater than 6.0% of Zn, and the balance of Mg, and the other unavoidable impurities. The total content of the Ca and the Y is equal to or greater than 0.1 % but less than 2.5% of the total weight of the magnesium alloy. The Mg alloy forms a dense composite oxide layer that acts as a protective film. Thus the Mg alloy has very excellent oxidation resistance and ignition resistance, can be melted, cast and machined in the air or a common inert atmosphere (Ar or N<sub>2</sub>), and can reduce the spontaneous ignition of chips that are accumulated during the process of machining.

IPC 8 full level  
**C22C 23/00** (2006.01); **B22D 21/04** (2006.01); **C22C 23/02** (2006.01); **C22C 23/04** (2006.01)

CPC (source: EP KR US)  
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