

Title (en)

Stationary or cosmetic article of magnesium material

Title (de)

Büro- oder Kosmetikartikel aus einem Magnesiumwerkstoff

Title (fr)

Article de bureau ou cosmétique en matériau de magnésium

Publication

EP 1813441 B2 20121121 (DE)

Application

EP 06001569 A 20060125

Priority

EP 06001569 A 20060125

Abstract (en)

[origin: EP1813441A1] The cosmetic article comprises component formed using magnesium material. The inorganic protective layer is chemically bonded to the component. The protective layer containing metal chosen from groups of III, IV, V, VI, Ib, IVb, Vb, VIb, VIIb and VIIIb and their oxide, ceramic, nitride, carbide, silicide and/or boride. The component is a sharpener (1), a ruler or a cosmetic container. The protective layer further contains metal chosen from aluminum, tin, vanadium, chromium, molybdenum, zirconium, hafnium, titanium, iron, tungsten, platinum, copper, silver and gold and their oxide, ceramic, nitride, carbide, silicide and/or boride. The protective layer has at least one layer containing metal nitride, metal carbide, metal silicide and/or metal boride. The metal nitride layer is a nitrided metal layer chosen from nitrided chromium layer, nitrided iron layer, nitrided molybdenum layer and nitrided tungsten layer. The metal boride layer is a boron compound deposited on the magnesium material. The protective layer containing metal oxide is a mixed metal oxide which contains colored mixed oxide. The colored mixed oxide consists of titanium oxide, vanadium oxide, zirconium oxide, niobium oxide and/or tantalum oxide.

IPC 8 full level

B43L 7/00 (2006.01); **A45D 34/00** (2006.01); **B43L 23/00** (2006.01)

CPC (source: EP US)

B43L 7/00 (2013.01 - EP US); **B43L 23/00** (2013.01 - EP US); **B43L 23/08** (2013.01 - EP US); **C23C 30/00** (2013.01 - EP US); **A45D 34/00** (2013.01 - EP US)

Citation (opposition)

Opponent :

- DE 735241 C 19430510 - IG FARBENINDUSTRIE AG
- DE 618614 C 19350912 - WALTER HEIMBERGER DR ING
- DE 10127770 A1 20021212 - VOLKSWAGEN AG [DE]
- J.E. GRAY, B. LUAN: "Protective coatings on magnesium and its alloys - a critical review", JOURNAL OF ALLOYS AND COMPOUNDS 336 (2002) 88-113, 2002

Designated contracting state (EPC)

DE FR GB IT PL

DOCDB simple family (publication)

EP 1813441 A1 20070801; **EP 1813441 B1 20080730**; **EP 1813441 B2 20121121**; DE 502006001234 D1 20080911; PL 1813441 T3 20090630; US 2007172679 A1 20070726

DOCDB simple family (application)

EP 06001569 A 20060125; DE 502006001234 T 20060125; PL 06001569 T 20060125; US 69831307 A 20070125