

## Title (en)

ALUMINIUM ALLOY STRIP WHICH IS RESISTANT TO INTERCRYSTALLINE CORROSION AND METHOD FOR PRODUCING SAME

## Title (de)

HOCHUMFORMBARES UND IK-BESTÄNDIGES ALMG-BAND

## Title (fr)

BANDE D'ALLIAGE EN ALUMINIUM RÉISTANT À LA CORROSION INTERCRISTALLINE ET SON PROCÉDÉ DE FABRICATION

## Publication

**EP 2888383 B1 20160330 (DE)**

## Application

**EP 13756053 A 20130822**

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## Abstract (en)

[origin: WO2014029856A1] The invention relates to a cold-rolled aluminum alloy strip made of an AlMg aluminum alloy as well as a method for producing the same. Furthermore, adequate components made from said aluminum alloy strips are also disclosed. The aim of the invention is to design a single-layer aluminum alloy strip that is sufficiently resistant to intergranular corrosion and is nevertheless very easily malleable so that even large-area deep-drawn parts, e.g. interior parts of motor vehicle doors, can be made with sufficient strength. Said aim is achieved by an aluminum alloy strip made of an AlMg aluminum alloy which has the following alloying components: Si  $\leq$  0.2 wt.%, Fe  $\leq$  0.35 wt.%, Cu  $\leq$  0.15 wt.%, 0.2 wt.%  $\leq$  Mn  $\leq$  0.35 wt.%, 4.1 wt.%  $\leq$  Mg  $\leq$  4.5 wt.%, Cr  $\leq$  0.1 wt.%, Zn  $\leq$  0.25 wt.%, Ti  $\leq$  0.1 wt.%, the remainder consisting of Al and inevitable impurities, each of which amounts to no more than 0.05 wt.% and the total amount of which amounts to no more than 0.15 wt.%. The aluminum alloy strip has a recrystallized structure, the average grain size of the structure ranges from 15  $\mu$ m to 30  $\mu$ m, preferably from 15  $\mu$ m to 25  $\mu$ m, and the final soft annealing of the aluminum alloy strip is performed in a continuous furnace.

## IPC 8 full level

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## CPC (source: EP RU US)

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**C22F 1/047** (2013.01 - EP US); **C22F 1/047** (2013.01 - RU)

## Citation (opposition)

Opponent : Aleris Aluminum Duffel BVBA against European Pate

- EP 0818553 A1 19980114 - HOOGO VENS ALUMINIUM NV [BE]
- EP 0259700 A1 19880316 - SKY ALUMINIUM [JP]
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Opponent : Novelis, Inc.

- STEFAN LANG: "Entwicklung einer neuen AlMg-Legierung für Außenhaut- Karosseriebleche mit verbesserter Umformbarkeit", PHD THESIS, 1999, pages 44 - 49, 78-79, 86-89, 130-133 and 182-183, XP055525920
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## Designated contracting state (EPC)

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## DOCDB simple family (publication)

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 EP 2888383 A1 20150701; EP 2888383 B1 20160330; ES 2569945 T3 20160513; JP 2015532679 A 20151112; JP 5923665 B2 20160524;  
 KR 101709289 B1 20170222; KR 20150076151 A 20150706; RU 2015110021 A 20161020; RU 2608931 C2 20170126;  
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 JP 2015527926 A 20130822; KR 20157007194 A 20130822; RU 2015110021 A 20130822; US 201514624793 A 20150218