

## Title (en)

ALUMINIUM ALLOY, SEMI-FINISHED PRODUCT, CAN, METHOD FOR PRODUCING A SLUG, METHOD FOR PRODUCING A CAN, AND USE OF AN ALUMINIUM ALLOY

## Title (de)

ALUMINIUMLEGIERUNG, HALBZEUG, DOSE, VERFAHREN ZUR HERSTELLUNG EINES BUTZEN, VERFAHREN ZUR HERSTELLUNG EINER DOSE SOWIE VERWENDUNG EINER ALUMINIUMLEGIERUNG

## Title (fr)

ALLIAGE D'ALUMINIUM, PRODUIT SEMI-FINI, PROCÉDÉ POUR FABRIQUER UNE PASTILLE, PROCÉDÉ POUR FABRIQUER UNE BOÎTE ET UTILISATION D'UN ALLIAGE D'ALUMINIUM

## Publication

**EP 3847290 B1 20230118 (DE)**

## Application

**EP 19765435 A 20190903**

## Priority

- DE 102018215243 A 20180907
- EP 2019073474 W 20190903

## Abstract (en)

[origin: WO2020048988A1] The invention relates to an aluminium alloy consisting of: - 0.07 wt.% to 0.17 wt.% silicon, - 0.25 wt.% to 0.45 wt.% iron, - 0.02 wt.% to 0.15 wt.% copper, - 0.30 wt.% to 0.50 wt.% manganese, - 0.05 wt.% to 0.20 wt.% chromium, - 0.01 wt.% to 0.04 wt.% titanium, and - the remainder aluminium and optionally additional admixtures. The invention also relates to a semi-finished product, preferably a slug, or to a can, preferably an aerosol can, to a method for producing a slug, to a method for producing a can, preferably an aerosol can, and to a use of an aluminium alloy.

## IPC 8 full level

**C22F 1/04** (2006.01); **B65B 31/00** (2006.01); **B65D 83/14** (2006.01); **C22C 21/00** (2006.01)

## CPC (source: EP US)

**C21D 8/0226** (2013.01 - US); **C21D 8/0236** (2013.01 - US); **C22C 21/00** (2013.01 - EP US); **C22F 1/04** (2013.01 - EP US)

## Citation (opposition)

Opponent : Ball Corporation

- WO 2013040339 A1 20130321 - BALL AEROSPACE & TECH CORP [US], et al
- EP 3075875 A1 20161005 - TALUM D D KIDRICEVO [SI]
- ANONYMOUS: "International Alloy Designations and Chemical Composition Limits for Wrought Aluminum and Wrought Aluminum Alloys", TEAL SHEETS, ALUMINUM ASSOCIATION, 1 January 2015 (2015-01-01), pages 1 - 38, XP055460438, [retrieved on 20180319]
- FRIEDRICH OSTERMANN: "Anwendungstechnologie Aluminium ; 2.neu bearbeitete und aktualisierte Auflage", 1 January 2007, SPRINGER , New York, ISBN: 978-3-540-71196-4, article OSTERMANN, FRIEDRICH: "3 Legierungsaufbau, Wärmebehandlung, Normen;", pages: 79 - 220, XP009554515
- GEORGE E. TOTTEN, D. SCOTT MACKENZIE: "Handbook of Aluminum Volume 1, Physical Metallurgy and Processes", 1 January 2003, MARCEL DEKKER , New York, ISBN: 978-0-8247-0494-0, article TIRYAKIOGLU MURAT, JAMES T STALEY : "Physical Metallurgy and the Effect of Alloying Additions in Aluminum Alloys", pages: 81 - 210, XP093142438
- GEORGE E. TOTTEN, D. SCOTT MACKENZIE: "Handbook of Aluminum Volume 1, Physical Metallurgy and Processes", 1 January 2003, MARCEL DEKKER , New York, ISBN: 978-0-8247-0494-0, article HOWARD ROBERT, NEILS BOGH , D SCOTT MACKENZIE: "Heat Treating Processes and Equipment ", pages: 881 - 970, XP093142447
- A.K. VASUDEVAN, R.D. DOHERTY: "Aluminum Alloys - Contemporary Research and Applications", 1 January 1989, BOSTON, MASS. [U.A.] : ACADEMIC PR., US, ISBN: 0-12-341831-3, article R.E. SANDERS, JR., S.F. BAUMANN, AND H.C. STUMPF: "I. Introduction - . Non-Heat-Treatable Alloys;", pages: 66 - 105, XP009554524
- DAVIS JOSEPH R.: "Alloying : understanding the basics", 31 December 2001, MATERIALS PARK, OHIO : ASM INTERNATIONAL , ISBN: 978-0-87170-744-4, article J R DAVIS: "Aluminum and Aluminum Alloys", pages: 351 - 416, XP055429982, DOI: 10.1361/autb2001p351

Opponent : Neuman Aluminium Austria GmbH

- "Anwendungstechnologie Aluminium ; 2.neu bearbeitete und aktualisierte Auflage", 20 June 2007, SPRINGER , New York, ISBN: 978-3-540-71196-4, article FRIEDRICH OSTERMANN: "2 Märkte und Anwendungen", pages: 9 - 77, XP093168767
- "Thesis", 1 September 2005, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, article PRESTON PUI-CHEN LI: "Strategies for aluminum recycling: Insights from material system optimization", pages: 1 - 185, XP093168769
- ANONYMOUS: "ÖNORM EN 573-3, Aluminium und Aluminiumlegierungen - Chemische Zusammensetzung und Form von Halbzeug; Teil 3: Chemische Zusammensetzung und Erzeugnisformen", ÖNORM EN, 1 December 2022 (2022-12-01), pages 1 - 37, XP009554481

## Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

## DOCDB simple family (publication)

**WO 2020048988 A1 20200312**; BR 112021003332 A2 20210511; CN 112469841 A 20210309; CN 112469841 B 20221216; DE 102018215243 A1 20200312; EP 3847290 A1 20210714; EP 3847290 B1 20230118; ES 2940698 T3 20230510; HU E061473 T2 20230728; JP 2021536533 A 20211227; SI 3847290 T1 20230428; US 2021348254 A1 20211111

## DOCDB simple family (application)

**EP 2019073474 W 20190903**; BR 112021003332 A 20190903; CN 201980046098 A 20190903; DE 102018215243 A 20180907; EP 19765435 A 20190903; ES 19765435 T 20190903; HU E19765435 A 20190903; JP 2021537489 A 20190903; SI 201930470 T 20190903; US 201917274152 A 20190903