Title (en)

ALUMINUM ALLOY SHEET WITH EXCELLENT HIGH-TEMPERATURE PROPERTY FOR BOTTLE CAN

Title (de)

BLECH AUS ALUMINIUMLEGIERUNG MIT HERVORRAGENDEM HOCHTEMPERATURVERHALTEN FÜR FLASCHENDOSE

Title (fr)

TÔLE D'ALLIAGE D'ALUMINIUM AYANT UNE EXCELLENTE PROPRIÉTÉ DE RÉSISTANCE À HAUTE TEMPÉRATURE POUR UNE BOÎTE EN ALUMINIUM

Publication

EP 1870481 A1 20071226 (EN)

Application

EP 06715351 A 20060307

Priority

- JP 2006304381 W 20060307
- JP 2005089369 A 20050325
- JP 2005089370 A 20050325
- JP 2005089371 A 20050325

Abstract (en)

An aluminum alloy sheet for bottle cans superior in high-temperature properties and capable of preventing thermal deformation thereof in coating and heat treatment and securing can strength after the heat treatment. The aluminum alloy sheet has the following composition: Mn 0.7-1.5%, Mg 0.8-1.7%, Fe 0.1-0.7%, Si 0.05-0.5%, Cu 0.1-0.6%, with the remainder being Al and inevitable impurities, and has a crystal structure elongated in a rolling direction and with an aspect ratio of crystal grains of 3 or more as determined through an examination from above of a part located at the center in the through-thickness direction. In the sheet, the amount of solute Cu is 0.05-0.3%, which means the amount of Cu in a solution separated from a precipitate exceeding 0.2 m in particle size by the extracted residue method using hot phenol, and the amount of solute Mg is 0.75-1.6%, which means the amount of solute Mg separated from a precipitate exceeding 0.2 m in particle size by the extracted residue method using hot phenol. The aluminum alloy sheet can have improved high-temperature properties without impairing its formability.

IPC 8 full level

C22C 21/06 (2006.01); **C22C 21/00** (2006.01); **C22F 1/00** (2006.01); **C22F 1/04** (2006.01); **C22F 1/047** (2006.01)

CPC (source: EP KR US)

C22C 21/00 (2013.01 - EP KR US); **C22C 21/06** (2013.01 - KR); **C22C 21/08** (2013.01 - EP US)

Cited by

KR20170084285A; RU2668357C2; AU2016233621B2; RU2687791C2; US11433441B2; WO2016100800A1; US10006108B2; WO2016149061A1; WO2015107284A1; US10675669B2; WO2014184450A1; US10577683B2; EP3137641B1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1870481 A1 20071226; **EP 1870481 A4 20080528**; CA 2602657 A1 20061005; EP 2281910 A1 20110209; EP 2281911 A1 20110209; KR 100953799 B1 20100421; KR 20070107148 A 20071106; US 2009053099 A1 20090226; WO 2006103887 A1 20061005

DOCDB simple family (application)

EP 06715351 A 20060307; CA 2602657 A 20060307; EP 10010378 A 20060307; EP 10010379 A 20060307; JP 2006304381 W 20060307; KR 20077021791 A 20060307; US 90966506 A 20060307