Title (en)

PLASTIC SURFACE TREATMENT METHOD

Title (de)

VERFAHREN ZUM BEHANDELN VON KUNSTSTOFFOBERFLÄCHEN

Title (fr)

PROCÉDÉ DE TRAITEMENT DE SURFACE EN PLASTIQUE

Publication

EP 3450590 A4 20191002 (EN)

Application

EP 17789112 A 20170314

Priority

- JP 2016091178 A 20160428
- JP 2017010208 W 20170314

Abstract (en)

[origin: EP3450590A1] Provided is a Cr-free plastic surface treatment method which can provide a plating film sufficiently adhered to a plastic surface. The plastic surface treatment method comprises treating plastic with a solution obtained by electrolyzing sulfuric acid. It is preferable that the sulfuric acid concentration of the sulfuric acid solution is 50 to 92 wt%, the persulfuric acid concentration is not less than 3 g/L, and the treatment temperature is not lower than 80°C, for example, 80 to 140°C, particularly 100 to 130°C. By immersing plastic in this sulfuric acid solution for 1 minute to 10 minutes, hydrophilic functional groups are exposed on the surface of the plastic.

IPC 8 full level

C23C 18/24 (2006.01); **C25B 1/28** (2006.01); **C25B 1/30** (2006.01); **C25B 15/08** (2006.01)

CPC (source: EP KR US)

C23C 18/1641 (2013.01 - KR); **C23C 18/24** (2013.01 - EP KR US); **C25B 1/29** (2021.01 - EP KR US); **C25B 15/08** (2013.01 - EP US); **C25B 15/085** (2021.01 - KR); C23C 18/1641 (2013.01 - US)

Citation (search report)

- [XI] US 3597336 A 19710803 - SHOTTON JAMES A, et al
- [X] EP 2853619 A1 20150401 - ATOTECH DEUTSCHLAND GMBH [DE]
- [E] WO 2017137584 A1 20170817 - BICONEX GMBH [DE]
- See references of WO 2017187823A1

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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)

EP 3450590 A1 20190306; **EP 3450590 A4 20191002**; CN 108884569 A 20181123; CN 108884569 B 20210226; JP 2017197831 A 20171102; JP 6750293 B2 20200902; KR 102401889 B1 20220524; KR 20190003487 A 20190109; US 2019136380 A1 20190509; WO 2017187823 A1 20171102

DOCDB simple family (application)

EP 17789112 A 20170314; CN 201780022812 A 20170314; JP 2016091178 A 20160428; JP 2017010208 W 20170314; KR 20187028806 A 20170314; US 201716091388 A 20170314