

Title (en)
THERMO TRANSFER FILMS FOR THE DRY LACQUERING OF SURFACES

Title (de)
THERMOTRANSFERFOLIEN FÜR DIE TROCKENLACKIERUNG VON OBERFLÄCHEN

Title (fr)
FILMS DE TRANSFERT THERMIQUE POUR LA PEINTURE À SEC DE SURFACES

Publication
EP 3046778 B1 20171220 (DE)

Application
EP 14766739 A 20140918

Priority
• EP 13185007 A 20130918
• EP 2014069895 W 20140918
• EP 14766739 A 20140918

Abstract (en)
[origin: WO2015040113A1] The present invention relates to heat transfer films, comprising: a) a carrier film (2), b) at least one, for example one, two or three, coating layer(s) (3) arranged directly on the carrier film (2), c) at least one, in particular precisely one, hot-sealable polymer adhesive layer (4), wherein the coating layer is based on a non-aqueous, radiation-curable, liquid composition which contains at least 60 wt%, in particular at least 70 wt%, based on the total weight of the composition, curable constituents selected from organic oligomers which have ethylenically unsaturated double bonds and mixtures of these oligomers with monomers which have at least one ethylenically unsaturated double bond. The invention also relates to the use of the heat transfer films for the dry coating of surfaces. The invention also relates to the production of such heat transfer films and to a method for coating or lacquering surfaces of objects using the heat transfer films according to the invention.

IPC 8 full level
B41M 3/12 (2006.01); **B44C 1/17** (2006.01)

CPC (source: EP RU US)
B41M 3/12 (2013.01 - EP US); **B41M 5/38214** (2013.01 - US); **B41M 5/38242** (2013.01 - US); **B44C 1/17** (2013.01 - RU); **B44C 1/1712** (2013.01 - EP); **B44C 1/1729** (2013.01 - EP US); **B41M 2205/06** (2013.01 - US); **B41M 2205/10** (2013.01 - US); **B41M 2205/30** (2013.01 - US); **B41M 2205/40** (2013.01 - US)

Citation (opposition)
Opponent : LEONHARD KURZ Stiftung & Co. KG
• WO 2013019821 A1 20130207 - SUN CHEMICAL CORP [US], et al
• WO 2005035460 A1 20050421 - BASF AG [DE], et al
• US 2011189477 A1 20110804 - MIRACLE RONALD L [US], et al
• US 2010215875 A1 20100826 - YANG CHING-CHANG [TW], et al
• EP 0210620 A2 19870204 - KURZ LEONHARD FA [DE]
• WO 2006005434 A1 20060119 - GIESECKE & DEVRIENT GMBH [DE], et al
• US 2012070595 A1 20120322 - SLOAT JEFFREY T [US], et al
• WO 2011012520 A2 20110203 - SICPA HOLDING SA [CH], et al
• DE 102010034039 A1 20120216 - BUNDESDRUCKEREI GMBH [DE]
• EP 1304235 A1 20030423 - MZE ENGINEERING GMBH [DE]
• EP 1527825 A1 20050504 - DU PONT [US]
• WO 2008061930 A1 20080529 - CIBA HOLDING INC [CH], et al
• JP 2012011677 A 20120119 - DAINIPPON PRINTING CO LTD
• WO 2011098514 A1 20110818 - DSM IP ASSETS BV [NL], et al
• JP 2006181791 A 20060713 - KURARAY CO

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 2015040113 A1 20150326; CN 105555545 A 20160504; CN 105555545 B 20200303; DK 3046778 T3 20180409; DK 3046778 T4 20221114; EP 3046778 A1 20160727; EP 3046778 B1 20171220; EP 3046778 B2 20220817; ES 2663451 T3 20180412; ES 2663451 T5 20221207; JP 2016538165 A 20161208; JP 6581589 B2 20190925; NO 3046778 T3 20180519; PL 3046778 T3 20180831; PL 3046778 T5 20230109; PT 3046778 T 20180322; RU 2016114693 A 20171020; RU 2016114693 A3 20180531; RU 2674190 C2 20181205; SI 3046778 T1 20180430; US 10710388 B2 20200714; US 2016297226 A1 20161013; US 2019315144 A1 20191017

DOCDB simple family (application)
EP 2014069895 W 20140918; CN 201480051191 A 20140918; DK 14766739 T 20140918; EP 14766739 A 20140918; ES 14766739 T 20140918; JP 2016543400 A 20140918; NO 14766739 A 20140918; PL 14766739 T 20140918; PT 14766739 T 20140918; RU 2016114693 A 20140918; SI 201430640 T 20140918; US 201414917980 A 20140918; US 201916389144 A 20190419