Title (en)

DIRT- AND OIL-REPELLENT COATING FOR BANKNOTE PAPER AND METHOD FOR PRODUCING SAME

Title (de)

SCHMUTZ- UND ÖLABWEISENDE BESCHICHTUNG FÜR BANKNOTENPAPIER UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

REVÊTEMENT REPOUSSANT LA SALETÉ ET LES GRAISSES POUR PAPIERS FIDUCIAIRES ET PROCÉDÉ DE FABRICATION

Publication

EP 3879031 B1 20231129 (EN)

Application

EP 18939532 A 20181217

Priority

- UA U201811012 U 20181107
- UA U201811013 U 20181107
- UA 2018000134 W 20181217

Abstract (en)

[origin: EP3879031A1] The present inventions relate to a dirt and grease resistant coating for paper intended primarily for the production of banknotes and to a method for its manufacturing. The dirt and grease resistant coating for banknote paper containing fibrous base according to the invention comprises the following ingredients: binder polymer, reticular agent, filler, grease resistant substance and water with the following ingredients' ratio (in wt.%): binder polymer — 18 to 25 of absolutely dry substance; reticular agent — 1 to 2 of absolutely dry substance; filler — 0.5 to 4 of absolutely dry substance; grease resistant substance — 0.2 to 1.0 of absolutely dry substance; water — necessary quantity to reach 100 in total.The method for manufacturing a dirt and grease resistant coating for banknote paper includes the preparation of a liquid composition with a polyurethane-containing binder polymer and subsequent forming of banknote paper coating from the liquid composition obtained in such a manner, wherein according to the invention, the liquid composition is made of the following ingredients (in wt.%): binder polymer — 18 to 25 of absolutely dry substance; reticular agent — 1 to 2 of absolutely dry substance; filler — 0.5 to 4 of absolutely dry substance; grease resistant substance — 0.2 to 1.0 of absolutely dry substance; water — necessary quantity to reach 100 in total; the above mentioned ingredients are mixed at a temperature of 15°C to 40°C with continuous stirring in the reactor until a homogeneous water dispersion is obtained, said dispersion having a total solids content within a range of about 12% to 32% of the dispersion weight (preferably about 20% to 25%) and a neutral acidity value (pH).The present inventions are aimed to create such a dirt and grease resistant coating for banknote paper and such a method for its manufacturing that would make it possible to obtain a coating with enhanced dirt and grease resistance properties. The problem is solved by creating conditions for the formation, in the proposed coating, of a composition aimed at forming, in the binder polymer — the polyurethane film, a microporous structure possessing sufficient adhesion to printing inks and at the same time demonstrating a grease resistant effect against contaminants — the sweat and grease secretions of human hands and the everyday oil/grease soiling, including those caused by food.

IPC 8 full level

B42D 25/36 (2014.01); **B41M 3/14** (2006.01); **B42D 25/29** (2014.01); **B42D 25/45** (2014.01); **D21H 19/44** (2006.01); **D21H 19/62** (2006.01); **D21H 21/16** (2006.01); **D21H 21/40** (2006.01)

CPC (source: EP)

B42D 25/29 (2014.10); **B42D 25/36** (2014.10); **B42D 25/45** (2014.10); **D21H 19/44** (2013.01); **D21H 19/62** (2013.01); **D21H 21/16** (2013.01); **D21H 21/40** (2013.01)

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 3879031 A1 20210915; **EP 3879031 A4 20220914**; **EP 3879031 B1 20231129**; **EP 3879031 C0 20231129**; DE 212018000341 U1 20200626; WO 2020096557 A1 20200514

DOCDB simple family (application)

EP 18939532 A 20181217; DE 212018000341 U 20181217; UA 2018000134 W 20181217