

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

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Application

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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.

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