

Title (en)
PROCESS FOR MANUFACTURING MULTI-LAYER SUBSTRATES COMPRISING SANDWICH LAYERS AND POLYETHYLENE

Title (de)
VERFAHREN ZUR HERSTELLUNG VON MEHRSCICHTSUBSTRATEN AUS SANDWICHSCICHTEN UND POLYETHYLEN

Title (fr)
PROCÉDÉ DE FABRICATION DE SUBSTRATS MULTICOUCHES COMPRENANT DES COUCHES EN SANDWICH ET DU POLYÉTHYLÈNE

Publication
EP 3945977 A4 20221012 (EN)

Application
EP 20782489 A 20200325

Priority

- US 201962828301 P 20190402
- US 201962860655 P 20190612
- US 2020024675 W 20200325

Abstract (en)
[origin: WO2020205360A1] Methods for forming multi-layer substrates comprising top and bottom surface layers and a melt softened thermoplastic material layer between the exterior surface layers, where the thermoplastic material comprises polyethylene or has a tan delta value of 0.2 to 0.4 within the temperature range of 100°F-350°F. The 3 (or more) layers are assembled, and heated, melt softening the thermoplastic material, causing bonding of the thermoplastic layer to the exterior surface layers. A cleaning composition may finally be loaded onto the multi-layer substrate, where a fluid pathway through the melted thermoplastic material allows the cleaning composition to travel between the surface layers. Adhesion between the surface layers and the thermoplastic layer is provided by the thermoplastic material itself, which bonds to groups of fibers in the surface layers. The process does not require chemical adhesives, any processing water, drying, or the like, so as to be possible with low capital investment.

IPC 8 full level
A47L 13/16 (2006.01); **A47L 13/17** (2006.01); **B32B 3/26** (2006.01); **B32B 5/06** (2006.01); **B32B 5/26** (2006.01); **B32B 7/022** (2019.01); **B32B 7/05** (2019.01); **C11D 1/62** (2006.01); **D04H 3/007** (2012.01)

CPC (source: EP)
A47L 13/16 (2013.01); **B32B 3/26** (2013.01); **B32B 5/06** (2013.01); **B32B 7/022** (2018.12); **B32B 7/05** (2018.12); **B32B 2255/02** (2013.01); **B32B 2260/023** (2013.01); **B32B 2262/0223** (2013.01); **B32B 2262/0276** (2013.01); **B32B 2262/06** (2013.01); **B32B 2307/30** (2013.01); **B32B 2307/54** (2013.01); **B32B 2307/554** (2013.01)

Citation (search report)

- [X1] WO 2010028238 A1 20100311 - NUTEK DISPOSABLES INC [US], et al
- [X1] WO 9855295 A1 19981210 - INT PAPER CO [US]
- See references of WO 2020205360A1

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 2020205360 A1 20201008; CA 3128040 A1 20201008; CL 2021002497 A1 20220701; CN 113518573 A 20211019; CN 113518573 B 20230404; EP 3945977 A1 20220209; EP 3945977 A4 20221012; MX 2021011796 A 20211013

DOCDB simple family (application)
US 2020024675 W 20200325; CA 3128040 A 20200325; CL 2021002497 A 20210927; CN 202080018329 A 20200325; EP 20782489 A 20200325; MX 2021011796 A 20200325