



(43) International Publication Date
15 October 2015 (15.10.2015)

(51) International Patent Classification:

D01F 1/10 (2006.01) *C08J 5/18* (2006.01)
D01F 6/14 (2006.01) *C08L 29/04* (2006.01)

(21) International Application Number:

PCT/US2015/024512

(22) International Filing Date:

6 April 2015 (06.04.2015)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/978,336 11 April 2014 (11.04.2014) US
14/677,026 2 April 2015 (02.04.2015) US

(71) Applicant: **GEORGIA-PACIFIC CONSUMER PRODUCTS LP** [US/US]; 133 Peachtree Street, N.E., Atlanta, Georgia 30303 (US).

(72) Inventors: **SUMNIGHT, Daniel W.**; 1754 Berkshire Drive, Hobart, Wisconsin 54313 (US). **SCHULZE, Thomas**; Schlossstrasse 22, D-07407 Rudolstadt (DE). **NIEMZ, Frank-Gunther**; Cumbacher Strasse 19, D-07407 Rudolstadt (DE).

(74) Agents: **BOZEK, Laura L.** et al.; Patent Group GA030-39, Georgia-Pacific LLC, 133 Peachtree Street, N.E., Atlanta, Georgia 30303 (US).

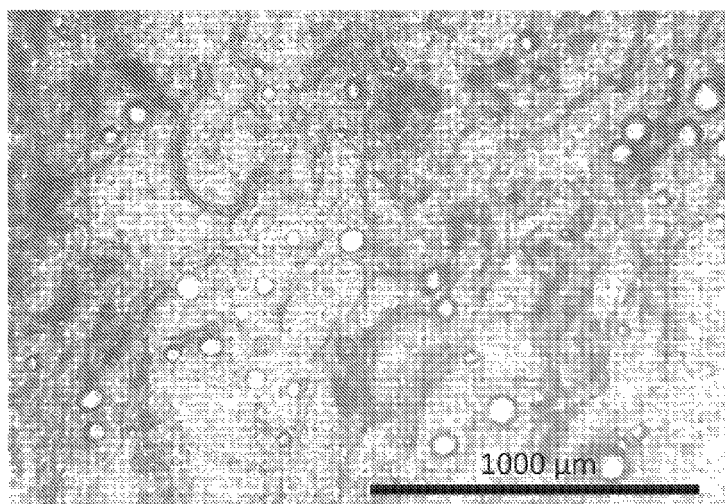
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: POLYVINYL ALCOHOL FIBERS AND FILMS WITH MINERAL FILLERS AND SMALL CELLULOSE PARTICLES



(57) Abstract: The present invention is directed to an article of manufacture, which can be a fiber and or a film. In one aspect, the fiber or the film comprises a polyvinyl alcohol (PVOH) and an inorganic filler comprising particles having an average diameter of less than about 20 micrometers. The PVOH has a degree of hydrolysis of greater than about 95% and is present in a range between about 20 wt. % and about 99 wt. % based on the total fiber weight. Methods of making the fibers and films are also disclosed.

