



- (51) **International Patent Classification:**
C08L 23/14 (2006.01) *F16L 9/12* (2006.01)
C08F 2/00 (2006.01)
- (21) **International Application Number:**
PCT/EP2014/001068
- (22) **International Filing Date:**
22 April 2014 (22.04.2014)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
13002099.3 22 April 2013 (22.04.2013) EP
- (71) **Applicants:** **ABU DHABI POLYMERS COMPANY LIMITED (BOROUGE)** [AE/AE]; Sheikh Khalifa Energy Complex, Corniche Road, P.O. Box 6925, Abu Dhabi (AE). **BOREALIS AG** [—/AT]; IZD Tower, Wagramerstrasse 17-19, A-1220 Wien (AT).
- (72) **Inventors:** **HEDESIU, Cristian**; Innovention Center, SKEC, Boroque Tower, 11th Floor, P.O. Box 6951, Abu Dhabi (AE). **ALASTALO, Kauno**; Karjapolku 4, FIN-06400 Porvoo (FI).
- (74) **Agent:** **KADOR & PARTNER**; Corneliusstrasse 15, 80469 München (DE).

(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, LT, 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, 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).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

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

(54) **Title:** POLYPROPYLENE COMPOSITION WITH IMPROVED IMPACT RESISTANCE FOR PIPE APPLICATIONS

(57) **Abstract:** The present invention relates to a polypropylene composition comprising a multimodal propylene random copolymer with at least one comonomer selected from alpha-olefins with 2 or 4 to 8 carbon atoms, wherein the polypropylene composition has a melt flow rate MFR₂ (2.16 kg, 230°C) of 0.05 to 1.0 g/10 min, determined according to ISO 1133, a polydispersity index (PI) of 2.0 to 7.0, and a Charpy Notched Impact Strength at 0°C of more than 4.0 kJ/m², determined according to ISO 179/1eA:2000 using notched injection moulded specimens, a process for producing said polypropylene composition, an article comprising said polypropylene composition and the use of said polypropylene composition for the production of an article.

