

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(10) International Publication Number  
**WO 2020/222019 A1**

(43) International Publication Date  
05 November 2020 (05.11.2020)

(51) International Patent Classification:

C08G 64/02 (2006.01) C08G 64/34 (2006.01)  
C08G 18/44 (2006.01) C08G 65/26 (2006.01)  
C08G 64/18 (2006.01)

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).

(21) International Application Number:

PCT/GB2020/051083

(22) International Filing Date:

01 May 2020 (01.05.2020)

Published:

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

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

1906214.0 02 May 2019 (02.05.2019) GB

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(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, DJ, DK, DM, DO,  
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,  
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,  
KR, KW, 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, ST, SV, SY, TH, TJ, TM, TN, TR,  
TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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,

(54) Title: A POLYOL BLOCK COPOLYMER, COMPOSITIONS AND PROCESSES THEREFOR

(57) Abstract: A process for producing a polyol block copolymer in a multiple reactor system is described comprising a first and second reactor wherein a first reaction takes place in the first reactor and a second reaction takes place in the second reactor. The first reaction is the reaction of a carbonate catalyst with CO<sub>2</sub> and epoxide, in the presence of starter and/or solvent to produce polycarbonate polyol copolymer and the second reaction is the reaction of DMC catalyst with the polycarbonate polyol compound of the first reaction and epoxide to produce polyol block copolymer. The product of the first reaction is fed into the second as crude reaction mixture, the epoxide and the polycarbonate polyol compound of the first reaction are fed in a continuous or semi-batch manner, and/or the product of the first reaction has neutral or alkaline pH on addition to the second. The invention further relates to the copolymers and products incorporating such copolymers.



WO 2020/222019 A1