



(51) International Patent Classification:

C08G 77/46 (2006.01) **C08L 83/12** (2006.01)
C08K 5/524 (2006.01)

(21) International Application Number:

PCT/US2012/028687

(22) International Filing Date:

12 March 2012 (12.03.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/469,836 31 March 2011 (31.03.2011) US

(71) **Applicant** (for all designated States except US): **DOW CORNING CORPORATION** [US/US]; 2200 West Salzburg Road, Midland, MI 48686-0994 (US).

(72) **Inventor; and**

(71) **Applicant** (for all designated States except US): **JAMES, Victoria** [GB/GB]; 33 Ty Wern Avenue Rhiwbina, Cardiff CF14 6AW (GB).

(72) **Inventors; and**

(75) **Inventors/Applicants** (for US only): **COOK, Simon** [GB/US]; 1601 Settlers Passage, Midland, MI 48642 (US). **DURAND, Geraldine** [FR/FR]; 4 York Court Schooner Way, Cardiff CF10 4DY (GB). **EASTON, Thomas** [GB/GB]; 102 Churchfields, Barry CF63 1FS (GB). **O'HARE, Sarah** [GB/GB]; 5 Ringwood Crescent, St. Athan (raf), Nr. Barry CF62 4LA (GB). **SURGENOR, Avril** [GB/BE]; Avenue Du Champ De Mai 29, B-1410 Waterloo (BE). **TAYLOR, Richard** [GB/GB]; 140 South Road, Sully, Penarth CF64 5SP (GB).

(74) **Agent**: **BROWN, Catherine, U.**; Dow Corning Corporation, Patent Department - Mail Co1232, 2200 West Salzburg Road, Midland, MI 48686-0994 (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, 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, IS, JP, KE, KG, KM, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, MD, 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, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

Published:

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

(54) **Title**: CONDENSATION REACTION CURABLE SILICONE ORGANIC BLOCK COPOLYMER COMPOSITION CONTAINING A PHOSPHONATE CATALYST AND METHODS FOR THE PREPARATION AND USE OF THE COMPOSITION

(57) **Abstract**: A condensation reaction curable composition comprises a new catalyst, Dow Corning® 4-6085, and a polyorganosiloxane polyoxyalkylene block copolymer having one or more polyorganosiloxane blocks and one or more polyoxyalkylene blocks linked to each other via divalent radicals which comprises at least two silicon-bonded alkoxy groups, preferably of the form PS - (A - PO)_m - (A - PS)_n, wherein PO is a polyoxyalkylene block, PS represents a polyorganosiloxane block, A is a divalent radical, subscripts m and n have independently a value of at least 1, comprising at least one alkoxy-substituted siloxane unit of the formula (R')_q(OR)-SiO_{3-q/2}, wherein R represents an alkyl group having 1 to 4 carbon atoms and each R' represents an alkyl group having 1 to 6 carbon atoms, a phenyl group, or an alkoxy group of the formula -OR and subscript q has a value of 0, 1 or 2, provided at least two silicon-bonded groups OR are present in the block copolymer. Also provided is a hydrophilic polymer network made from curing the composition in the presence of moisture.

