

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

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number
WO 2019/231715 A1

(43) International Publication Date
05 December 2019 (05.12.2019)

(51) International Patent Classification:

C09K 8/528 (2006.01) C08F 283/06 (2006.01)
C02F 5/10 (2006.01)

Published:

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

(21) International Application Number:

PCT/US2019/032868

(22) International Filing Date:

17 May 2019 (17.05.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

201841020598 01 June 2018 (01.06.2018) IN

(71) Applicants: DOW GLOBAL TECHNOLOGIES LLC

[US/US]; 2040 Dow Center, Midland, Michigan 48674 (US). ROHM AND HAAS COMPANY [US/US]; 400 Arcola Road, Collegeville, Pennsylvania 19426 (US).

(72) Inventors: DEO, Puspendu;

230 Abner Jackson Pkwy, Lake Jackson, Texas 77566 (US). ABRAMO, Graham P.; 400 Arcola Road, Collegeville, Pennsylvania 19426 (US). YOUNG, Kaylie L.; 230 Abner Jackson Pkwy, Lake Jackson, Texas 77566 (US). MEHTA, Somil Chandrakant; 14, Girish Kunj, 41, Swastik Society, N.S. Road No. 3, JVPD Scheme, Mumbai 400056 (IN).

(74) Agent: GRESENS, John J; AKERMAN LLP, 71 S. Wacker

Dr., Suite 4600, Chicago, IL 60606 (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, 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, 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).

(54) Title: METHOD OF SILICA SCALE INHIBITION, USING ACID GRAFTED EO-PO COPOLYMERS

(57) Abstract: A method for inhibiting silica scale formation which treats aqueous systems with a polymerizable-acid graft copolymer that includes an unsaturated grafting acid and having a percent acid graft of between about 3 wt. % and about 35 wt. %, as well as an alkylene oxide polymer backbone.

