

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

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number
WO 2012/141855 A1

(43) International Publication Date
18 October 2012 (18.10.2012)

(51) International Patent Classification:
C10M 135/18 (2006.01)

(21) International Application Number:
PCT/US2012/029865

(22) International Filing Date:
21 March 2012 (21.03.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/476,060 15 April 2011 (15.04.2011) US
61/510,544 22 July 2011 (22.07.2011) US

(71) Applicant (for all designated States except US): **R.T. VANDERBILT COMPANY, INC.** [US/US]; 30 Winfield Street, Norwalk, CT 06855 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DONNELLY, Steven, G.** [US/US]; 22 Linda Lane, Bethel, CT 06810 (US). **AGUILAR, Gaston, A.** [US/US]; 9 Nicole Drive, Milford, CT 06460 (US). **CHASE, Kevin, J.** [US/US]; 26 Surrey Lane, Branford, CT 06405 (US). **WALLACK, William, T.** [US/US]; 196 Bouton Street West, Stamford, CT 06907 (US).

(74) Agent: **LONDA, Bruce, S.**; Norris McLaughling & Marcus PA, 875 Third Ave, 8th Floor, New York, NY 10022 (US).

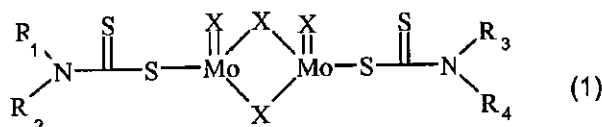
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, 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).

Published:

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

(54) Title: MOLYBDENUM DIALKYLDITHIOCARBAMATE COMPOSITIONS AND LUBRICATING COMPOSITIONS CONTAINING THE SAME



(57) Abstract: A novel molybdenum dithiocarbamate composition is produced by preparing a ditridecylamine (DTD A) intermediate from a butylene feedstock comprising greater than 50% 2-butylene, and preparing a molybdenum dithiocarbamate composition from the DTDA intermediate. The resulting molybdenum dithiocarbamate composition are according to formula (1), wherein R₁ to R₄ are C₁₁-C₁₄ isoalkyl groups, and X represents oxygen and/or sulfur atoms, and R₁ to R₄ comprise, on average, greater than 98% C₁₃.

WO 2012/141855 A1