

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 July 2009 (09.07.2009)

PCT

(10) International Publication Number
WO 2009/086140 A3

(51) International Patent Classification:

C10M 169/04 (2006.01) *C10N 30/04* (2006.01)
C10M 129/10 (2006.01) *C10N 40/02* (2006.01)
C10M 129/50 (2006.01) *C10N 40/04* (2006.01)
C10N 30/02 (2006.01)

(21) International Application Number:

PCT/US2008/087739

(22) International Filing Date:

19 December 2008 (19.12.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/017,251 28 December 2007 (28.12.2007) US

(71) Applicants (for all designated States except US):

CHEVRON ORONITE COMPANY LLC [US/US];
6001 Bollinger Canyon Road, San Ramon, California
94583 (US). **CHEVRON ORONITE S.A.** [FR/FR]; 79
rue Anatole France, 92309 Levallois-Perret, Cedex (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CAMPBELL, Curt B.** [US/US]; 118 Montego Drive, Hercules, California 94547 (US). **SINQUIN, Gilles P.** [FR/FR]; 8 route de la cayenne, F-96290 Saint Martin Du Manoir (FR). **SPALA, Eugene E.** [US/US]; 2403 Homestead Court, Fairfield, California 94534 (US). **CHAPON, Gilbert R.** [FR/FR]; 20 Impasse des Chataigniers, F-76290 Montivilliers (FR).

(74) Agents: **JONES, Josetta I.** et al.; Chevron Corporation, Law Department, Post Office Box 6006, San Ramon, California 94583-0806 (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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, 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))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

3 September 2009

(54) Title: LOW TEMPERATURE PERFORMANCE LUBRICATING OIL DETERGENTS AND METHOD OF MAKING THE SAME

(57) Abstract: A carboxylate detergent prepared by the process comprising (a) alkylating a hydroxyaromatic compound with at least one normal alpha olefin having from about 12 to about 30 carbon atoms per molecule that has been isomerized to obtain an isomerized alpha olefin having 15-98 wt% branching and a residual alpha olefin content of between from about 0.1 to about 30 wt %, thereby producing an alkylated hydroxyaromatic compound; (b) neutralizing the resulting alkylated hydroxyaromatic compound with an alkali metal base; (c) carbonating the alkali metal salt from step (b) with carbon dioxide; (d) acidifying the salt produced in step (c); and (e) overbasing the resulting alkylated hydroxyaromatic carboxylic acid.



WO 2009/086140 A3