

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 September 2006 (08.09.2006)

PCT

(10) International Publication Number
WO 2006/094011 A3

(51) International Patent Classification:
C10M 159/18 (2006.01)

(21) International Application Number:
PCT/US2006/007175

(22) International Filing Date:
28 February 2006 (28.02.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/657,610 1 March 2005 (01.03.2005) 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): **TYNIK, Robert, J.** [US/US]; 8 Jayne Way, Norwalk, CT 06851 (US). **DONNELLY, Steven, G.** [US/US]; 22 Linda Lane, Bethel, CT 06801 (US). **KAROL, Thomas, J.** [US/US]; 76-5917 (H) Mamalahoa Highway, Holuolua, HI 96725 (US).

(74) Agent: **LONDA, Bruce, S.**; Norris McLaughlin & Marcus, P.A., 875 Third Avenue, 18th Floor, New York, NY 10022 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

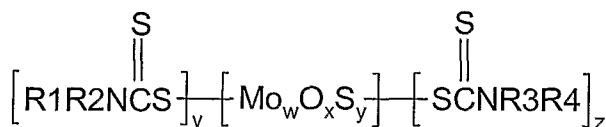
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
22 November 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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



v = 1-2; w = 1-2; x + y = 2-5; z = 1-2

be represented by the following formula.

(57) Abstract: This invention relates to a novel asymmetrical, secondary dialkylamine-based molybdenum dithiocarbamate with improved friction reducing performance, viscosity and solubility, and lubricating compositions containing the same. The compounds are produced from asymmetrical dialkylamine of the formula R1-NH-R2 where R1 and R2 are different, and are independently selected from alkyl groups C3 to C 19. In a preferred embodiment, R3 and R4 are different and are independently selected from alkyl groups C3 to C 19. The molybdenum dithiocarbamates can

WO 2006/094011 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/07175

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - C10M 159/18 (2007.01) USPC - 508/230 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) USPC 508/230 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WEST(USPT,PGPB,EPAB,JPAB), Google Scholar, Dialog terms: lubricating, molybdenum, dithiocarbamate		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 6,245,725 B1 (TANAKA et al.) 12 June 2001 (12.06.2001), col 4, ln 17; col 3 ln 5; col 4, ln 26; col 2, ln 55-col 3 ln 5; col 1, ln 47-60; col 2, ln 51-64	1-7, 16 8-15, 17-19
Y	US 2003/0224951 A1 (MCCONNACHIE et al.) 04 December 2003 (04.12.2003), para [0002], [0024]	8-15, 17-19
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Date of the actual completion of the international search 24 June 2007 (24.06.2007)		Date of mailing of the international search report 18 SEP 2007
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774