

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 July 2008 (10.07.2008)

PCT

(10) International Publication Number
WO 2008/083246 A3

(51) International Patent Classification:
C08F 8/34 (2006.01)

(74) Agents: **NATTLER, Gerlinde** et al.; Continental Teves, Inc., One Continental Drive, Auburn Hills, Michigan 48326 (US).

(21) International Application Number:
PCT/US2007/088988

(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, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

(22) International Filing Date:
27 December 2007 (27.12.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/617,659 28 December 2006 (28.12.2006) US

(71) Applicant (for all designated States except US): **CONTINENTAL AG** [DE/DE]; Continental Ag, Vahrenwalder Strasse 9, 30165 Hannover (DE).

(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, MT, 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).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **YORK, W. Michael** [US/US]; 725 Foxwood Drive, Concord, North Carolina 28025 (US). **CRUSE, Richard, W.** [US/US]; 171 Montross Rd., Yorktown Heights, Yorktown Heights, New York 10598 (US). **RECKER, Carla** [DE/DE]; Blumenhagenstrasse 13, 30167 Hannover (DE). **POHL, Eric Raymond** [US/US]; 2501 Canterbury Way, Mt. Kisco, New York 10549 (US). **JOSHI, Prashant, G.** [IN/US]; 208 Park Avenue, Gaithersburg, Maryland 20877 (US).

Published:

— with international search report

(88) Date of publication of the international search report:
4 September 2008

(54) Title: TIRE COMPOSITIONS AND COMPONENTS CONTAINING BLOCKED MERCAPTOSILANE COUPLING AGENT

(57) Abstract: Sulfur silane coupling agents for use in tire compositions used to formulate tires or tire components which contain multiple blocked mercapto groups which are in a state of reduced activity until activated. The coupling agents are advantageously used in rubber formulations, including tire compositions, for example, for fabricating tires with low rolling resistance.

WO 2008/083246 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/US 07/88988

A CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C08F 8/34 (2008.04)

USPC - 525/332.6

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 525/332 6

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)

Electronic Databases Searched USPTO WEST (PGPUB, EPAB, JPAB, USPT), Google patent, Google scholar Search Terms Used tire composition, silyl or silane or silated, polysulfide, cyclic adj core, metal oxide polyvalent, polyisoprene or silicon or silica, polysulfurized alkoxy silane, coupling agents, shore or hardness, rubber

C DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 2006/0183866 A1 (Pohl et al) 17 August 2006 (17 08 2006) entire document especially para [0009]-[00029], [0034], [0043], [0053]-[0057], [0059], [0060], [0062]-[0063], [0075], [0097]-[0098]	1-26
A	US 2006/0041063 A1 (Cruse et al) 23 February 2006 (23 02 2206) entire document especially para [0025]-[0028], [0082], [0180]	1-26
A	US 2006/0014870 A1 (Cruse et al) 19 January 2006 (19 01 2006) entire document especially [0009]-[0019]	1-26
A	US 2006/0036034 A1 (Chaves et al) 16 February 2006 (16 02 2006) entire document especially para [0008]-[0013], [0065], [0070], [0072]	1-26
A	US 4,210,459 A (Williams et al) 01 July 1980 (01 07 1980) entire document especially col 1. In 41 to col 2, In 20	1-26

D Further documents are listed in the continuation of Box C**D**

<ul style="list-style-type: none"> • Special categories of cited documents "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed 	<ul style="list-style-type: none"> "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family
---	--

Date of the actual completion of the international search

12 April 2008 (12 04 2008)

Date of mailing of the international search report

16 MAY 2008

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 Hq/ldesk 571 272 4300
PCT OSP 571 272 7774