

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

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
5 May 2011 (05.05.2011)

(10) International Publication Number  
**WO 2011/053622 A3**

PCT

(51) International Patent Classification:

*C14C 9/00* (2006.01) *D06M 13/348* (2006.01)  
*D06M 15/256* (2006.01) *D06M 13/395* (2006.01)

(21) International Application Number:

PCT/US2010/054213

(22) International Filing Date:

27 October 2010 (27.10.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0919014.1 30 October 2009 (30.10.2009) GB

(71) Applicant (for all designated States except US): **3M INNOVATIVE PROPERTIES COMPANY** [US/US]; 3M Center, Post Office Box 33427, MN 55133-3427 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **AUDENAERT, Frans, A.** [BE/BE]; Hermeslaan 7, B-1831 Deigem (BE).

(74) Agents: **FULTON, Lisa, P.** et al.; 3M Center, Office of Intellectual Property Counsel, Post Office Box 33427, Saint Paul, MN 55133-3427 (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, RO, RS, RU, 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, 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))
- 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:

22 September 2011

(54) Title: SOIL AND STAIN RESISTANT COATING COMPOSITION FOR FINISHED LEATHER SUBSTRATES

(57) Abstract: A coated leather substrate having at least one surface that comprises at least one first layer above that surface and at least one second layer above that first layer and, the first layer comprises at least one polymer and wherein the second layer being different in its chemical composition from the first layer comprises the reaction product of a cross-linking reaction of at least one first composition said first composition comprising one or more compounds having at least one fluoropolyether segment and at least two cross-linkable groups and said second composition comprising at least one fluorinated polyolefin. Furthermore are provided a coating composition, methods of coating leather substrates and use of the coating compositions.



WO 2011/053622 A3

## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2010/054213****A. CLASSIFICATION OF SUBJECT MATTER***C14C 9/00(2006.01)i, D06M 15/256(2006.01)i, D06M 13/348(2006.01)i, D06M 13/395(2006.01)i*

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)

C14C 9/00; C08K 5/16; C07C 125/073

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) &amp; Keywords: soil and stain resistance, coating, leather substrate, cross-linking reaction, coating composition, fluotopolyether segment, fluorinated polyolefin, fluorinated layer, natural look, flexibility.

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6479612 B1 (THOMAS WAYNE DEL PESCO) 12 November 2002 See abstract and claims 1-19.	1-3, 10-15
A	US 05100954 A (ITOH; KATSUJI et al.) 31 March 1992 See abstract and claims 1-4.	1-3, 10-15
A	JP 11-510209 A (BEYER AKUCHIEN GESELLSCHAFT) 07 September 1999 See abstract and claims 1-8.	1-3, 10-15
A	US 04709074 A (BATHELT; HEINRICH et al.) 24 November 1987 See abstract and claims 1-4.	1-3, 10-15



Further documents are listed in the continuation of Box C.



See patent family annex.

\* 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 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

"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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

28 JULY 2011 (28.07.2011)

Date of mailing of the international search report

**29 JULY 2011 (29.07.2011)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
Government Complex-Daejeon, 189 Cheongsu-ro,  
Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

PARK, Se Young

Telephone No. 82-42-481-8653



**INTERNATIONAL SEARCH REPORT**

International application No.

**PCT/US2010/054213****Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☒ Claims Nos.: 4,5,6,7,8,9  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2010/054213**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6479612 B1	12. 11. 2002	AT 318849 T	15. 03. 2006
		AU 6532700 A	05. 03. 2001
		AU 764359 B2	14. 08. 2003
		BR 0013329 A	16. 04. 2002
		CA 2378229 A1	15. 02. 2001
		CA 2378229 C	06. 10. 2009
		CN 1157430 C	14. 07. 2004
		CN 1370184 A	18. 09. 2002
		DE 60026319 D1	27. 04. 2006
		DE 60026319 T2	30. 11. 2006
		EP 1203037 A1	08. 05. 2002
		EP 1203037 B1	01. 03. 2006
		JP 2003-506537 T	18. 02. 2003
		TW 231818 B	01. 05. 2005
		WO 01-10921A1	15. 02. 2001
US 05100954A A	31. 03. 1992	CA 2023428 C	15. 02. 2000
		EP 0414155 A1	27. 02. 1991
		EP 0414155 B1	08. 03. 1995
		JP 08-009833 B2	31. 01. 1996
		JP 3076873 A	02. 04. 1991
JP 11-510209 A	07. 09. 1999	EP 0842300 A1	20. 05. 1998
		EP 0842300 A1	08. 11. 2000
		EP 0842300 B1	07. 11. 2001
		JP 03-874026 B2	31. 01. 2007
		US 05885474A A	23. 03. 1999
		WO 97-06279 A1	20. 02. 1997
US 04709074A A	24. 11. 1987	EP 0213580 A2	11. 03. 1987
		EP 0213580 A3	02. 03. 1988
		EP 0213580 B1	18. 07. 1990
		JP 08-009588 B2	31. 01. 1996
		JP 2102394 C	22. 10. 1996
		JP 62-096457 A	02. 05. 1987
		KR 10-1994-0007742 B1	24. 08. 1994