

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 December 2006 (07.12.2006)

PCT

(10) International Publication Number
WO 2006/128525 A3

(51) International Patent Classification:

C11D 1/83 (2006.01) *C11D 3/20* (2006.01)
C11D 1/825 (2006.01) *C11D 10/04* (2006.01)

(21) International Application Number:

PCT/EP2006/003792

(22) International Filing Date: 20 April 2006 (20.04.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

0510989.7 28 May 2005 (28.05.2005) GB

(71) Applicant (*for AE, AG, AU, BB, BW, BZ, CA, CY, EG, GB, GD, GH, GM, IE, IL, KE, KN, LC, LK, LS, LY, MN, MW, NA, NG, NZ, OM, PG, SC, SD, SG, SL, SZ, TT, TZ, UG, VC, ZA, ZM, ZW only*): **UNILEVER PLC** [GB/GB]; Unilever House, Blackfriars, London Greater London EC4P 4BQ (GB).

(71) Applicant (*for AL, AM, AT, AZ, BA, BE, BF, BG, BJ, BR, BY, CF, CG, CH, CI, CM, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, FR, GA, GE, GN, GQ, GR, GW, HR, HU, ID, IS, IT, JP, KG, KM, KP, KR, KZ, LR, LT, LU, LV, MA, MC, MD, MG, MK, ML, MR, MX, MZ, NE, NI, NL, NO, PH, PL, PT, RO, RU, SE, SI, SK, SM, SN, SY, TD, TG, TJ, TM, TN, TR, UA, UZ, VN, YU only*): **UNILEVER N.V.** [NL/NL]; Weena 455, NL-3013 Al Rotterdam (NL).

(71) Applicant (*for IN only*): **HINDUSTAN LEVER LIMITED** [IN/IN]; Hindustan Lever House, 165/166 Backbay Reclamation Maharashtra, Mumbai 400 020 (IN).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **BINDER, David, Alan** [US/US]; 69 South Leswing Avenue, Saddle Brook, New Jersey 07663 (US). **DE GROOT, Petrus, Wilhelmus, Nicolaas** [NL/NL]; Unilever R & D Vlaardingen,

Oliver Van Noortlaan 120, NL-3133 AT Vlaardingen (NL). **MACNAB, Donna** [GB/GB]; Unilever R & D Port Sunlight, Quarry Road East, Wirral, Bebington Merseyside CH63 3JW (GB). **VAN DER WAL, Albert** [NL/NL]; Unilever R & D Vlaardingen, Oliver Van Noortlaan 120, NL-3133 AT Vlaardingen (NL).

(74) Agent: **ELLIOTT, Peter, William**; Unilever Patent Group, Colworth House, Sharnbrook, Bedford Bedfordshire MK44 1LQ (GB).

(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

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

8 March 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: DETERGENT COMPOSITIONS AND THEIR USE

(57) Abstract: Use of a detergent composition comprising an amine oxide surfactant, at least one branched nonionic surfactant and at least one anionic component for enhancing particulate soil removal from a fabric washed in a wash liquor containing the detergent composition.



WO 2006/128525 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2006/003792

A. CLASSIFICATION OF SUBJECT MATTER

INV. C11D1/83 C11D1/825 C11D3/20 C11D10/04

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)

C11D

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 075 994 A (THE PROCTER & GAMBLE COMPANY) 6 April 1983 (1983-04-06) page 4, line 12 - page 5, line 24; claims; examples	1-16
X	----- US 5 981 466 A (MORELLI ET AL) 9 November 1999 (1999-11-09) cited in the application claims; examples -----	1-16



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 document 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

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

14 July 2006

Date of mailing of the international search report

12/12/2006

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Péntek, E

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2006/003792

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0075994	A	06-04-1983	BR 8205647 A	30-08-1983
			CA 1201953 A1	18-03-1986
			DE 3275202 D1	26-02-1987
US 5981466	A	09-11-1999	NONE	