

Title (en)
METHOD OF LAUNDERING FABRIC

Title (de)
VERFAHREN ZUM WASCHEN VON WÄSCHE

Title (fr)
PROCÉDÉ DE LAVAGE DU LINGE

Publication
EP 2694635 B1 20151125 (EN)

Application
EP 12707100 A 20120305

Priority
• EP 11160937 A 20110404
• EP 2012053709 W 20120305
• EP 12707100 A 20120305

Abstract (en)
[origin: EP2476743A1] A method of laundering fabric onto which a cationic fabric softening active has been deposited and dried comprising the step of contacting the fabric with an aqueous wash liquor having the following composition: a) 15 to 600 ppm non-soap surfactant, b) at least 50 ppm ethoxylated polyethylene imine, c) at least 25 ppm polyester soil release polymer, the total level of polymer (b+ c) being at least 20 wt% of the level of non soap surfactant (a), d) 0.1 to 100 ppm enzyme selected from protease, amylase, cellulase, e) optionally, lipase enzyme.

IPC 8 full level
C11D 3/00 (2006.01); **C11D 3/37** (2006.01); **C11D 3/386** (2006.01)

CPC (source: EP)
C11D 3/0036 (2013.01); **C11D 3/3715** (2013.01); **C11D 3/3723** (2013.01); **C11D 3/386** (2013.01); **C11D 3/38645** (2013.01); **C11D 2111/12** (2024.01)

Citation (opposition)
Opponent : Henkel AG & Co. KGaA
• WO 2009153184 A1 20091223 - UNILEVER PLC [GB], et al
• WO 9318124 A1 19930916 - PROCTER & GAMBLE [US]
• WO 2006072083 A1 20060706 - DIAL CORP [US], et al
• DE 102008032206 A1 20100114 - HENKEL AG & CO KGAA [DE]
• STEIGER ET AL.: "A study on the long-term stability and removal of quats on treated fabric", J SURFACTANTS AND DETERGENTS, vol. 5, no. 3, July 2002 (2002-07-01), pages 207 - 210, XP055307218
Opponent : The Procter & Gamble Company
• WO 2009153184 A1 20091223 - UNILEVER PLC [GB], et al
• WO 9815608 A2 19980416 - PROCTER & GAMBLE [US], et al
• WO 9318124 A1 19930916 - PROCTER & GAMBLE [US]
• US 4125370 A 19781114 - NICOL CHARLES H
• US 4132680 A 19790102 - NICOL CHARLES H
• KUO-YANN LAI: "Liquid Detergents, second edition", 2006, CRC PRESS, ISBN: 9780824758356, article "Chapter 12 - Fabric Softeners", pages: 487 - 554, XP055307205
• JAKOBI ET AL.: "Detergent & Textile Washing; Principle & Practice;", 1987, ISBN: 0895736861, pages: 14-21, 1 - 166, XP055307209
• DONN N. RUBINGH ET AL.: "Cationic Surfactants, Physical Chemistry", 1991, ISBN: 0824783573, article "Fabric Softening - Chapter 9", pages: 449 - 467, XP055307212
• ANTHONY J. O'LENICK, JR.: "Soil Release Polymers, Review", JOURNALS OF SURFACTANTS AND DETERGENTS, vol. 2, no. 4, October 1999 (1999-10-01), pages 553 - 557, XP000893935
• R.R. EGAN: "Cationic Surface Active Agents as Fabric Softeners", J. AM. OIL CHEMISTS'S SOC., vol. 55, no. 1, January 1978 (1978-01-01), pages 118 - 121, XP055307214
• GOGOI ET AL.: "Fabric Softeners: An overview", TECHNICAL ARTICLE, MAN-MADE TEXTILES IN INDIA, July 2009 (2009-07-01), pages 241 - 251, XP055307216
• ROLF PUTCHA: "Cationic Surfactants in Laundry Detergents and Laundry Aftertreatment Aids", JAOCS, vol. 61, no. 2, February 1984 (1984-02-01), pages 367 - 376, XP001390277

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 2476743 A1 20120718; EP 2476743 B1 20130424; AR 085771 A1 20131023; AU 2012238950 A1 20130919; AU 2012238950 B2 20141120; BR 112013025674 B1 20210202; CL 2013002817 A1 20140822; CN 103459577 A 20131218; CN 103459577 B 20150527; EP 2694635 A1 20140212; EP 2694635 B1 20151125; ES 2421162 T3 20130829; MX 2013011464 A 20131017; MY 161793 A 20170515; PL 2694635 T3 20160531; WO 2012136427 A1 20121011; ZA 201306447 B 20141029

DOCDB simple family (application)
EP 11160937 A 20110404; AR P120101100 A 20120330; AU 2012238950 A 20120305; BR 112013025674 A 20120305; CL 2013002817 A 20130930; CN 201280016945 A 20120305; EP 12707100 A 20120305; EP 2012053709 W 20120305; ES 11160937 T 20110404; MX 2013011464 A 20120305; MY P12013701844 A 20120305; PL 12707100 T 20120305; ZA 201306447 A 20130827