

Title (en)

Packaged particulate detergent composition

Title (de)

Verpackte partikelförmige Reinigungsmittelzusammensetzung

Title (fr)

Composition de détergent particulaire conditionnée

Publication

**EP 2639291 A1 20130918 (EN)**

Application

**EP 12159247 A 20120313**

Priority

EP 12159247 A 20120313

Abstract (en)

Provided is a packaged particulate detergent composition, wherein the composition is of large particles with good flow characteristics. The composition comprises surfactant selected from anionic and non-ionic surfactant, citric acid and sodium salts thereof, a phosphonate sequestrant, an inorganic salt selected from sodium carbonate and sodium sulphate, optionally a soil removal polymer and peroxide; the inorganic salt is present on the detergent particles as a coating and the surfactant as a core. The pH of a 1 wt % solution of the detergent composition is in the range from 7.2 to 10. The preferred shape of the coated particles is an oblate spheroid. A process for washing laundry is also claimed.

IPC 8 full level

**C11D 1/83** (2006.01); **C11D 3/04** (2006.01); **C11D 3/20** (2006.01); **C11D 3/36** (2006.01); **C11D 17/04** (2006.01)

CPC (source: EP)

**C11D 1/83** (2013.01); **C11D 3/046** (2013.01); **C11D 3/2086** (2013.01); **C11D 3/361** (2013.01); **C11D 17/0039** (2013.01); **C11D 17/041** (2013.01)

Citation (applicant)

- EP 1187903 A1 20020320 - PROCTER & GAMBLE [US]
- EP 0993505 A1 20000419 - UNILEVER PLC [GB], et al
- EP 0328177 A2 19890816 - UNILEVER NV [NL], et al
- EP 0070074 A2 19830119 - PROCTER & GAMBLE [US]
- EP 0258068 A2 19880302 - NOVO INDUSTRI AS [DK]
- EP 0305216 A1 19890301 - NOVO INDUSTRI AS [DK]
- WO 9613580 A1 19960509 - NOVO NORDISK AS [DK], et al
- EP 0218272 A1 19870415 - GIST BROCADES NV [NL]
- EP 0331376 A2 19890906 - AMANO PHARMA CO LTD [JP]
- GB 1372034 A 19741030 - UNILEVER LTD
- WO 9506720 A1 19950309 - SHOWA DENKO KK [JP], et al
- WO 9627002 A1 19960906 - SHOWA DENKO KK [JP], et al
- WO 9612012 A1 19960425 - SOLVAY [BE], et al
- JP S6474992 A 19890320 - FUJI OIL CO LTD
- WO 9116422 A1 19911031 - KALI CHEMIE AG [DE]
- WO 9205249 A1 19920402 - NOVO NORDISK AS [DK]
- WO 9401541 A1 19940120 - NOVO NORDISK AS [DK], et al
- EP 0407225 A1 19910109 - UNILEVER PLC [GB], et al
- EP 0260105 A2 19880316 - GENENCOR INC [US]
- WO 9535381 A1 19951228 - UNILEVER NV [NL], et al
- WO 9600292 A1 19960104 - UNILEVER NV [NL], et al
- WO 9530744 A2 19951116 - GIST BROCADES BV [NL], et al
- WO 9425578 A1 19941110 - GIST BROCADES NV [NL], et al
- WO 9514783 A1 19950601 - SHOWA DENKO KK [JP], et al
- WO 9522615 A1 19950824 - NOVO NORDISK AS [DK], et al
- WO 9704079 A1 19970206 - NOVO NORDISK AS [DK], et al
- WO 9707202 A1 19970227 - NOVO NORDISK AS [DK], et al
- WO 0060063 A1 20001012 - NOVO NORDISK AS [DK], et al
- WO 2009107091 A2 20090903 - PROCTER & GAMBLE [US], et al
- WO 2009111258 A2 20090911 - PROCTER & GAMBLE [US], et al
- GB 1296839 A 19721122
- WO 9526397 A1 19951005 - NOVO NORDISK AS [DK], et al
- WO 0060060 A2 20001012 - NOVO NORDISK AS [DK]
- US 4435307 A 19840306 - BARBESGAARD PEDER O [DK], et al
- US 5648263 A 19970715 - SCHUELEIN MARTIN [DK], et al
- US 5691178 A 19971125 - SCHUELEIN MARTIN [DK], et al
- US 5776757 A 19980707 - SCHUELEIN MARTIN [DK], et al
- WO 8909259 A1 19891005 - NOVO INDUSTRI AS [DK]
- WO 9629397 A1 19960926 - NOVO NORDISK AS [DK], et al
- WO 9812307 A1 19980326 - NOVO NORDISK AS [DK], et al
- WO 9324618 A1 19931209 - NOVO NORDISK AS [DK], et al
- WO 9510602 A1 19950420 - NOVO NORDISK AS [DK], et al
- WO 9815257 A1 19980416 - NOVO NORDISK AS [DK], et al
- WO 2009087524 A1 20090716 - PROCTER & GAMBLE [US], et al
- WO 2009090576 A2 20090723 - PROCTER & GAMBLE INTERNAT OPER [CH], et al
- WO 2009148983 A1 20091210 - PROCTER & GAMBLE [US], et al
- WO 2008007318 A2 20080117 - PROCTER & GAMBLE [US], et al
- WO 9219709 A1 19921112 - PROCTER & GAMBLE [US]
- WO 9219708 A1 19921112 - PROCTER & GAMBLE [US]
- WO 2010122050 A2 20101028 - UNILEVER PLC [GB], et al
- POWDER TECHNOLOGY, vol. 65, 1991, pages 257 - 272

- SCHWARTZ; PERRY: "Surface Active Agents", vol. 2, 1949, INTERSCIENCE
- SCHWARTZ; PERRY; BERCH: "SURFACE ACTIVE AGENTS", 1958, INTERSCIENCE
- "McCutcheon's Emulsifiers and Detergents", MANUFACTURING CONFECTIONERS COMPANY
- H. STACHE: "Tenside Taschenbuch", 1981, CARL HAUSER VERLAG
- "Industrial Dyes", 2003, WILEY-VCH
- "1992 International Buyers Guide", 1992, CFTA PUBLICATIONS
- "OPD 1993 Chemicals Buyers Directory", 1993, SCHNELL PUBLISHING CO
- POUCHER, JOURNAL OF THE SOCIETY OF COSMETIC CHEMISTS, vol. 6, no. 2, 1955, pages 80
- DARTOIS ET AL., BIOCHEMICA ET BIOPHYSICA ACTA, vol. 1131, 1993, pages 253 - 360
- "Colour Physics for Industry", 1997, THE SOCIETY OF DYERS AND COLOURISTS

Citation (search report)

- [ID] WO 2010122050 A2 20101028 - UNILEVER PLC [GB], et al
- [A] US 4269722 A 19810526 - JOSHI DAVID, et al
- [AD] EP 1187903 B1 20060315 - PROCTER & GAMBLE [US]
- [A] WO 0053714 A1 20000914 - PROCTER & GAMBLE [US], et al
- [A] JAKOBI G ET AL: "Detergents and Textile Washing. Principles and Practice", part 3.2 Builders 1 January 1987, VCH VERLAGSGESELLSCHAFT, Weinheim, DE, ISBN: 3-527-26810-3, pages: 63 - 71, XP002681068

Cited by

WO2020109227A1; EP3339407A1; US9512388B2; WO2018113643A1; WO2016134102A1; WO2018113646A1; WO2018048364A1; WO2018113644A1; WO2018113645A1

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 2639291 A1 20130918**

DOCDB simple family (application)

**EP 12159247 A 20120313**