

Title (en)

Water soluble package and liquid contents thereof

Title (de)

Wasserlösliche Verpackung und zugehörige Flüssigkeitsinhalte

Title (fr)

Emballage hydrosoluble et contenu liquide de celui-ci

Publication

EP 1400460 A1 20040324 (EN)

Application

EP 03077711 A 20030901

Priority

- EP 03077711 A 20030901
- EP 02078888 A 20020917

Abstract (en)

The present invention provides a water soluble package formed from a water soluble film containing a substantially nonaqueous liquid composition, said film comprising a plasticizer system and said liquid composition comprising a surfactant, and at least two different solvents being a primary and a secondary solvent, wherein the liquid composition contains the secondary solvent in an amount of at least 5% by weight of the primary solvent present therein and wherein the main plasticizer in the film is the same chemical as the secondary solvent. Said package was found to have considerably improved strength as compared to packages of the prior art. <IMAGE>

IPC 1-7

B65D 65/46; **C11D 17/04**

IPC 8 full level

B65D 65/46 (2006.01); **C11D 3/43** (2006.01); **C11D 17/04** (2006.01)

CPC (source: EP)

C11D 3/43 (2013.01); **C11D 17/043** (2013.01)

Citation (search report)

- [A] WO 02060980 A2 20020808 - PROCTER & GAMBLE [US]
- [A] US 5861370 A 19990119 - TRINH TOAN [US], et al
- [A] US 2002128170 A1 20020912 - DECLERCQ MARC JOHAN [BE], et al
- [A] WO 0190285 A1 20011129 - PROCTER & GAMBLE [US], et al
- [A] US 6335315 B1 20020101 - TRINH TOAN [US], et al
- [A] US 2002187909 A1 20021212 - GUPTA NEERAJ [GB], et al
- [A] GB 2369094 A 20020522 - PROCTER & GAMBLE [US]

Cited by

US10066195B2; AU2015333791B2; JPWO2017043510A1; JP2020200474A; EP1666579A1; JP2014507518A; EP3202879A1; US10047327B2; JP2019506502A; RU2692234C1; KR20170068556A; CN107001754A; AU2015333763B2; RU2705963C2; CN112011138A; US11407866B2; US7563757B2; US10336973B2; WO2006057905A1; WO2016061026A1; WO2017043510A1; WO2017136371A1; WO2016061054A1; US10844183B2; US10913832B2; US8242069B2; US10526479B2; US10513588B2; US11168289B2; US9624457B2; US10240114B2; WO2023100789A1; EP1666579B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1400460 A1 20040324; **EP 1400460 B1 20041117**; AT E282565 T1 20041215; DE 60300161 D1 20041223; DE 60300161 T2 20050414; ES 2230529 T3 20050501

DOCDB simple family (application)

EP 03077711 A 20030901; AT 03077711 T 20030901; DE 60300161 T 20030901; ES 03077711 T 20030901