

Title (en)

METHOD FOR PRODUCING GRANULATED OR POWDERLY DETERGENT COMPOUNDS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON GRANULÄREN ODER PULVERFÖRMIGEN WASCHMITTELZUSAMMENSETZUNGEN

Title (fr)

PROCEDE DE PRODUCTION DE COMPOSITIONS DETERGENTES GRANULAIRES OU PULVERULENTES

Publication

EP 1761622 B1 20090225 (DE)

Application

EP 05758640 A 20050618

Priority

- EP 2005006597 W 20050618
- DE 102004031040 A 20040625

Abstract (en)

[origin: US2007238637A1] The present invention relates to a process for preparing granular or pulverulent detergent compositions, comprising the preparation of a detergent base powder by drying an aqueous detergent slurry, which comprises adding to the slurry a copolymer which is obtainable by free-radical copolymerization of (A) from 50 to 99.5 mol % of a monoethylenically unsaturated monocarboxylic acid and/or a salt thereof, (B) from 0.5 to 20 mol % of an alkoxylated monoethylenically unsaturated monomer I in which the variables are defined as follows: R¹ is hydrogen or methyl; R² is -(CH_x-O_y-O_z-NR⁵-_x-, -CH_x-O_y-O_z-CR⁶-R⁷-CH_x-O_y-O_z- or -CONH-; R³ are each identical or different C_x-C_y-alkylene radicals which may be arranged blockwise or randomly, the proportion of ethylene radicals being at least 50 mol %; R⁴ is hydrogen, C_x-C_y-alkyl, -SO_x-M or -PO_x-M_y-; R⁵ is hydrogen or -CH_x-O_y-O_z-CR⁶-CH_x-O_y-O_z-; R⁶ is -O-[R³-O]_n-R⁷-4</sup>, where the -[R³-O]_n- radicals may be different from the further -[R³-O]_n- radicals present in formula I; R⁷ is hydrogen or ethyl; M is alkali metal or hydrogen; n is from 4 to 250; x is 0 or 1, (C) from 0 to 50 mol % of a monoethylenically unsaturated dicarboxylic acid, of an anhydride and/or of a salt thereof and (D) from 0 to 20 mol % of a further copolymerizable monoethylenically unsaturated monomer and has an average molecular weight M_x-w_y of from 30 000 to 500 000 g/mol and a K value of from 40 to 150 (measured at pH 7 in 1% by weight aqueous solution at 25° C.).

IPC 8 full level

C11D 3/37 (2006.01); **C11D 3/00** (2006.01); **C11D 11/02** (2006.01)

CPC (source: EP US)

C11D 3/0036 (2013.01 - EP US); **C11D 3/3761** (2013.01 - EP US); **C11D 11/02** (2013.01 - EP US)

Designated contracting state (EPC)

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

DOCDB simple family (publication)

US 2007238637 A1 20071011; AT E423836 T1 20090315; BR PI0512512 A 20080311; CA 2571706 A1 20060105; CA 2571706 C 20130611; CN 1973025 A 20070530; CN 1973025 B 20100505; DE 102004031040 A1 20060112; DE 502005006702 D1 20090409; EP 1761622 A1 20070314; EP 1761622 B1 20090225; ES 2320787 T3 20090528; JP 2008503623 A 20080207; MX PA06014512 A 20070323; WO 2006000357 A1 20060105

DOCDB simple family (application)

US 62969605 A 20050618; AT 05758640 T 20050618; BR PI0512512 A 20050618; CA 2571706 A 20050618; CN 200580021041 A 20050618; DE 102004031040 A 20040625; DE 502005006702 T 20050618; EP 05758640 A 20050618; EP 2005006597 W 20050618; ES 05758640 T 20050618; JP 2007517167 A 20050618; MX PA06014512 A 20050618