

Title (en)

Use of partially esterified copolymers in liquid detergent compositions.

Title (de)

Verwendung von Copolymerisaten als Zusatz zu Flüssigwaschmitteln.

Title (fr)

Utilisation de copolymères estérifiés partiellement pour compositions détergentes liquides.

Publication

EP 0368214 B1 19941019 (DE)

Application

EP 89120522 A 19891106

Priority

DE 3838093 A 19881110

Abstract (en)

[origin: EP0368214A2] The use of copolymers which contain as essential copolymerised units (a) 50 to 99 mol% of units of monoethylenically unsaturated (a) C3- to C8-monocarboxylic acids, monoethylenically unsaturated C4- to C8-dicarboxylic acids, hemiesters of monoethylenically unsaturated C4- to C8-dicarboxylic acids, esters of monoethylenically unsaturated C3- to C8-carboxylic acids, C2- to C30-olefins, styrene, C1- to C3-alkylstyrenes, C1- to C28-alkyl vinyl ethers, vinyl esters of saturated C1- to C8- carboxylic acids or mixtures of units of these monomers and (b) 50 to 1 mol% of units of amides of monoethylenically unsaturated C3- to C8-carboxylic acids with amide groups of the structure <IMAGE> in which R<1> = C8- to C28- alkyl, <IMAGE> R<3>, R<4> = H, CH₃, C₂H₅ R = C1- to C28-alkyl, n = 2 to 100 and R<2> = H, R<1> have K values of 8 to 200, or of salts of these copolymers, as additive to liquid detergent compositions in an amount of 0.1 to 20% by weight and aqueous liquid detergent compositions which contain these copolymers.

IPC 1-7

C11D 3/37

IPC 8 full level

C11D 3/32 (2006.01); **C11D 3/37** (2006.01)

CPC (source: EP KR US)

C11D 1/00 (2013.01 - KR); **C11D 3/3773** (2013.01 - EP US)

Cited by

EP0636687A3; EP0442191A1; US5409629A; EP0923001A1; US5972572A; WO9202606A1; US9279097B1; US9637709B2; US10179889B2

Designated contracting state (EPC)

AT BE CH DE ES FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0368214 A2 19900516; EP 0368214 A3 19901107; EP 0368214 B1 19941019; AT E113068 T1 19941115; AU 4450589 A 19900517; AU 620465 B2 19920220; CA 2001660 A1 19900510; DE 3838093 A1 19900517; DE 58908529 D1 19941124; ES 2061885 T3 19941216; JP H02173095 A 19900704; KR 900008025 A 19900602; US 5009805 A 19910423

DOCDB simple family (application)

EP 89120522 A 19891106; AT 89120522 T 19891106; AU 4450589 A 19891109; CA 2001660 A 19891027; DE 3838093 A 19881110; DE 58908529 T 19891106; ES 89120522 T 19891106; JP 28895889 A 19891108; KR 890016296 A 19891110; US 42408489 A 19891019