

Title (en)

Amphoteros polymers as soil release additive in washing agents

Title (de)

Amphotere Polymere als Soil Release Additive in Waschmitteln

Title (fr)

Polymères amphotères en tant qu'additifs antisalissure dans des produits de lavage

Publication

EP 1972683 A1 20080924 (DE)

Application

EP 08004263 A 20080307

Priority

DE 102007013141 A 20070315

Abstract (en)

Use of polymers, which soluble in water at 20[deg] C comprising at least a polymerized monomer of: alkene amide monomer (a); alkene amide monomer (b); acryl- or methacryl acid; and/or other monomer groups of 3-6 carbon ethylenically unsaturated carboxylic acid such as crotonic acid, maleic acid, maleic anhydride, fumaric acid, itaconic acid and their salts, or amide monomer (c) and its salt, preferably alkali metal and ammonium salts, as soil-release additive in detergents, is claimed, where the acryl- or methacrylic acid monomer is present at greater than 25 wt.%. Use of polymers, which soluble in water at 20[deg] C comprising at least a polymerized monomer of: alkene amide monomer of formula (H 2C=CR 1>-CO-NH-R 2>-N +>R 3>R 4>R 5>X ->) (a); alkene amide monomer of formula (H 2C=CR 6>-CO-NR 7>R 8>) (b); acryl- or methacryl acid; and/or other monomer groups of 3-6 carbon ethylenically unsaturated carboxylic acid such as crotonic acid, maleic acid, maleic anhydride, fumaric acid, itaconic acid and their salts, or amide monomer of formula (H 2C=CR-CO-NH-CR1aR2aR3a-SO 3H) (c) and its salt, preferably alkali metal and ammonium salts, as soil-release additive in detergents, is claimed, where the acryl- or methacrylic acid monomer is present at greater than 25 wt.%. R 1>H or 1-4C alkyl; R 2>1-12C alkylene; R 3>-R 5>H, 1-18C alkyl or phenyl; X ->anion of halo, sulfates and/or alkylsulfate, OH, phosphate, acetate, formate or ammonium; R 6>H, 1-6C alkyl; R 7>, R 8>H, 1-4C alkyl or 3-6C cycloalkyl; and R1a, R2a, R3a : H or 1-4C alkyl(ene). Provided that R 7> and R 8> not simultaneously H. Independent claims are included for: (1) process of incorporating a soil-release polymer with the textiles comprising: contacting the textile in an alkaline solution with an agent containing (I) and, optionally surfactant and further additives; heating the obtained textile by at least 30[deg] C; and subsequently drying, where optionally the textile is contacted with clean water before drying; (2) liquid detergent, comprising: (I) (0.05-10 (preferably 0.05-5) wt.%); surfactant (5-45 wt.%); water (at least 16 wt.%); and optionally further auxiliary material and additives; and (3) solid detergent comprising: (I) (0.05-10 (preferably 0.05-5) wt.%); surfactant (2-20 wt.%); water (0.05-10 wt.%); and optionally further auxiliary material and additives.

Abstract (de)

Es werden ampholytische wasserlösliche Polymere beschrieben, die sich als Soil-release Additive in festen und flüssigen Waschmitteln verwenden lassen. Die Polymere sind besonders geeignet, um Baumwolle und/oder Baumwolle/Synthetik-Mischgewebe vor öl-und/oder fetthaltige Anschmutzungen zu schützen. Weiterhin werden feste wie flüssige Waschmittel beschrieben, die solche Polymere als Soil-Release Additive enthalten.

IPC 8 full level

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

CPC (source: EP)

C11D 3/0036 (2013.01); **C11D 3/3796** (2013.01)

Citation (applicant)

- EP 0253567 A1 19880120 - PROCTER & GAMBLE [US], et al
- DE 10152308 A1 20030508 - HENKEL KGAA [DE]
- EP 1767554 A1 20070328 - COGNIS IP MAN GMBH [DE]
- EP 1645619 A1 20060412 - COGNIS IP MAN GMBH [DE]

Citation (search report)

- [PXD] EP 1767554 A1 20070328 - COGNIS IP MAN GMBH [DE]
- [A] US 6703358 B1 20040309 - AUBAY ERIC [FR], et al
- [A] US 5308532 A 19940503 - ADLER DAVID E [US], et al
- [A] WO 2005049189 A1 20050602 - RHODIA CHIMIE SA [FR], et al

Cited by

WO2018095923A1; CN110088259A; EP3766952A1; EP3766953A1; CN114040677A; US11649310B2; US11692052B2; WO2019197185A1; WO2019197188A1; WO2019197186A1; US11512266B2; DE102016223584A1; DE102016223585A1; WO2018095916A1; US11530373B2; WO2019197187A1; WO2021011952A1

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