

Title (en)

Use of comb polymers as soil release polymers

Title (de)

Verwendung von Kammpolymeren als Schmutzablösepolymere

Title (fr)

Utilisations de polymères peignes comme polymères éliminant la saleté

Publication

**EP 1035194 B1 20040915 (DE)**

Application

**EP 00102085 A 20000203**

Priority

DE 19906367 A 19990216

Abstract (en)

[origin: DE19906367A1] Soil release polymers are comb polymers (I) obtained by condensation of: (a) a polycarboxylic acid or polyol; (b) optionally sulfonated di-, tri- or tetrahydric polyol(s) or polyglycols; (c) optionally 2-10 carbon dicarboxylic acid(s); and (d) compound(s) selected from mono- or di-alkyl- or -aryl-amines, alcohols or phenols, carboxylic acids, glycols or (poly)ether glycols and sulfonated alcohols. Compound(s) (III) selected from mono- or di-alkyl- or -aryl-amines (IIIA, IIIB), alcohols or phenols (IIIC), carboxylic acids (IIID), glycols or (poly)ether glycols (IIIE) and sulfonated alcohols (IIIF) are comprised of formulae: HO-(XO)a-H (II) NH<sub>2</sub>R (IIIA) NHR<sub>2</sub> (IIIB) ROH (IIIC) R<1>COOH (IIID) HO(XO)bH (IIIE) HO(CH<sub>2</sub>CH<sub>2</sub>)dSO<sub>3</sub>K (IIIF) X = C<sub>2</sub>H<sub>4</sub> and/or C<sub>3</sub>H<sub>7</sub>; a = 2-35, preferably 2-5; b = 2-40, preferably 3-20; d = 1-10, preferably 1-4; K = a cation; R = 1-22C alkyl or 6-10C aryl; R<1> = 1-22C alkyl or sulfoalkyl, 6-10C aryl or sulfoaryl; An Independent claim is also included for the production of the oligoester (I).

IPC 1-7

**C11D 3/37**

IPC 8 full level

**C08G 63/668** (2006.01); **C08G 63/688** (2006.01); **C11D 3/37** (2006.01); **D06M 15/507** (2006.01)

CPC (source: EP US)

**C11D 3/0036** (2013.01 - EP US); **C11D 3/37** (2013.01 - EP US); **C11D 3/3746** (2013.01 - EP US)

Cited by

DE102009020299A1; US8846599B2; DE102007013217A1; WO2012171849A1; WO2006133868A1; WO02062856A3; US9090741B2

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