

Title (en)  
IMPROVEMENTS RELATING TO LAUNDRY CLEANING COMPOSITIONS

Title (de)  
VERBESSERUNGEN IM ZUSAMMENHANG MIT WÄSCHEREINIGUNGSZUSAMMENSETZUNGEN

Title (fr)  
AMÉLIORATION DE COMPOSITIONS NETTOYANTES DE BLANCHISSERIE

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Application  
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Abstract (en)  
[origin: WO2008129026A1] The invention provides a laundry cleaning composition comprising: a) at least one laundry adjunct selected from: builder, enzyme, fluorescer, perfume, anti-redeposition polymer, soil release polymer, source of alkalinity, chelating agents other than for hardness ions, bleach or precursor thereof, and, b) a surfactant system comprising: i) at least 1%wt on total surfactant of one or more anionic surfactants, ii) at least 1%wt on total surfactant of one or more nonionic surfactants, and, iii) 0.5-30%wt on total surfactant of, a mixed cationic surfactant system consisting of a 9:1-1:9 weight ratio of one or more first cationic surfactant of general type (I) and one or more second cationic surfactant of general type (II), wherein: cationic surfactants of type I are quaternary ammonium compounds of the general formula: C<sub>4539</sub> (C) CPL -53- [R<sub>1</sub> -N<sup>+</sup> ( R<sub>2</sub> ) 2-CH 2-R<sub>3</sub> ] Z<sup>-</sup> (Type I): in which: Z<sup>-</sup> is an anionic counter-ion, R<sub>1</sub> is a straight or branched C<sub>6</sub> to C<sub>20</sub> alkyl or alkenyl group, R<sub>2</sub> is, independently, a C<sub>1</sub> to C<sub>4</sub> alkyl group, R<sub>3</sub> is H, phenyl, benzyl or C<sub>1</sub> to C<sub>20</sub> alkyl benzyl, and, cationic surfactants of type II which are quaternary ammonium compounds of the general formula: [R<sub>1</sub> -(A) n-N<sup>+</sup> ( R<sub>4</sub> ) ((A) IR<sub>5</sub> )-(A) mR<sub>4</sub> ] Z<sup>-</sup> (Type II) in which: Z<sup>-</sup>, R<sub>1</sub> are as defined above, A is the same or a different C<sub>1</sub>-C<sub>4</sub> alkoxy group and n, m and l are independently 0 to 30, R<sub>4</sub> is, independently, R<sub>2</sub> or a C<sub>2</sub>-C<sub>4</sub> hydroxy-alkyl group, and, R<sub>5</sub> is R<sub>2</sub> or H with the proviso that should the structure of a type II cationic surfactant be such that it falls within the definition of type I cationic surfactants it shall be counted only as a type I cationic surfactant. Preferably the Type I surfactant is benzalkonium chloride and preferably the Type II surfactant is selected from the group comprising fatty dialkyl dimethyl hydroxy-ethyl ammonium chloride, fatty monoalkyl tri-ethoxy trimethyl ammonium chloride and mixtures thereof. Preferably the ratio of the type I to type II surfactant is in the range 1:1-5:1, more preferably 2:1-4:1.

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