

Title (en)

DISHWASHING FORMULATION COMPRISING A MIXTURE OF HYDROPHOBICALLY MODIFIED POLYCARBOXYLATES AND HYDROPHILICALLY MODIFIED POLYCARBOXYLATES

Title (de)

GESCHIRREINIGUNGSFORMULIERUNGEN ENTHALTEND EIN GEMISCH AUS HYDROPHOB MODIFIZIERTEN POLYCARBOXYLATEN UND HYDROPHIL MODIFIZIERTEN POLYCARBOXYLATEN

Title (fr)

FORMULATIONS DE DÉTERGENTS POUR LA VAISSELLE, CONTENANT UN MÉLANGE DE POLYCARBOXYLATES À MODIFICATION HYDROPHOBE ET DE POLYCARBOXYLATES À MODIFICATION HYDROPHILE

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Application

EP 08839722 A 20081010

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Abstract (en)

[origin: WO2009050123A2] The invention relates to a phosphate-free cleaning formulation for automatic dishwashing, comprising, as components: a) 1 to 20 weight % of a mixture of a1) 5 to 95 weight % of hydrophobically modified polycarboxylates I made of a11) 20 to 80 mol % of at least one monoethylene unsaturated C3-C10-mono or dicarboxylic acid or the anhydride thereof, a12) 0 to 80 mol % of at least one monomer of the general formula (I), where R1, R2 and R3 independently mean H, CH3 or C2H5, and R4 means a linear, branched, or cyclical radical having 1 to 6 carbon atoms or an aromatic radical having 6 to 12 carbon atoms, and a13) 0 to 20 mol % of at least one additional monomer, selected from the group comprising olefins having 10 or more carbon atoms, or the mixtures thereof, and reactive polyisobutenes having an average of 12 to 100 carbon atoms, a2) 5 to 95 weight % of hydrophilically modified polycarboxylates (II) from a21) 50 to 99 mol % acrylic acid or acrylic acid salt, a22) 0 to 50 mol % of a further acid monomer and/or a water-soluble salt of the same, a23) 0.1 to 20 mol % of at least one non-ionic monomer of the general formula (II), where the sum of a1) and a2) is 100 weight %, b) 0 to 50 weight % of complexing agent, c) 0.1 to 20 weight % of weakly foaming non-ionic tensides, d) 0.1 to 30 weight % bleaching agent and optionally bleach activators, e) 0 to 60 weight % of additional builders, f) 0 to 8 weight % of enzymes, g) 0 to 50 weight % of one or more further additives.

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Cited by

WO2024089079A1; WO2015070117A1; US9353335B2; US9683203B2; US10316272B2; US10745651B2; US11339354B2; US11920109B2

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