

## Title (en)

USE OF CATIONICALLY MODIFIED, PARTICULATE, HYDROPHOBIC POLYMERS AS AN ADDITIVE FOR RINSING, CLEANING AND IMPREGNATING AGENTS FOR HARD SURFACES

## Title (de)

VERWENDUNG VON KATIONISCH MODIFIZIERTEN, TEILCHENFÖRMIGEN HYDROPHOBEN POLYMEREN ALS ZUSATZ ZU SPÜL-, REINIGUNGS- UND IMPRÄGNIERMITTELN FÜR HARTE OBERFLÄCHEN

## Title (fr)

UTILISATION DE POLYMERES HYDROPHOBES, PARTICULAIRES ET MODIFIES CATIONIQUEMENT COMME ADJUVANTS DANS DES PRODUITS DE RINCAGE, DE NETTOYAGE ET D'IMPREGNATION DESTINES AUX SURFACES DURES

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## Application

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## Abstract (en)

[origin: DE10027638A1] The use of particulate, hydrophobic polymers with a particle size of 10 nm to 100 microns, cationically modified by coating with cationic polymers, as additives in washing, cleaning and impregnating materials for hard surfaces. Independent claims are also included for: (i) a cleaning material for hard surfaces, containing: (a) 0.05-40 wt.% of (I); (b) 0-20 wt.% of water-soluble salt(s) of magnesium, calcium, zinc or aluminum and/or 0.01-30 wt.% of a cationic surfactant and/or 0.01-15 wt.% of cationic polymer; (c) 0-80 wt.% of additive(s) such as acid or base, inorganic builders, organic co-builders, other surfactants, polymeric color-transfer or greying inhibitors, soil-release polymers, enzymes, complex-formers, corrosion inhibitors, waxes, silicone oils, light stabilizers, dyes, solvents, hydrotropic additives, thickeners and/or alkanolamines; and (d) water (to make up to 100 wt.%); (ii) a hard surface cleaner containing: (a) 0.1-30 wt.% of modified polymer as above (I) containing anionic unsaturated monomer units and dispersed in water; (b) 0.05-20 wt.% of acid; (c) 0-30 wt.% of water-soluble salt(s) of magnesium, calcium, zinc or aluminum and/or a cationic surfactant and/or 0.01-15 wt.% of cationic polymer; (d) 0-20 wt.% of additive(s) such as perfume, other surfactants, silicone oil, light stabilizers, dyes, complex-formers, greying inhibitors, soil-release polyesters, color-transfer inhibitors, non-aqueous solvents, hydrotropic additives, thickeners and/or alkanolamines; and (e) water (to make up 100 wt.%); (iii) a liquid cleaning and care formulation containing: (a) 0.05-30 wt.% of (I); (b) 0.1-40 wt.% of non-ionic or anionic surfactant(s); (c) 0-30 wt.% of salts and/or surfactant as above and/or 0.01-15 wt.% of cationic polymer; (d) 0-10 wt.% of complex-former; (e) 0-20 wt.% of additives such as pH regulators, thickeners, solvents, hydrotropic agents, polycarboxylic acids, silicones, brighteners, perfumes and/or dyes; and (f) 0-90 wt.% of water; (iv) a liquid acid cleaner containing: (a) 0.1-30 wt.% of hydrophobic polymer (particle size as above) with anionic monomer units, dispersed in water; (b) 0.05-20 wt.% of acid; (c) 0.1-30 wt.% of water-soluble cationic polymer; (d) 0-10 wt.% of complex former; (e) 0-20 wt.% of additives as in (ii); and (f) 0-90 wt.% of water; (v) a liquid acid cleaner containing: (a) 0.5-25 wt.% of hydrophobic polymer with 5-45 wt.% of unsaturated carboxylic acid monomer units, dispersed in water with anionic emulsifier and/or protective colloid; (b) 0.01-40 wt.% of non-ionic or anionic surfactant; (c) 0.01-20 wt.% of water-soluble or -dispersible cationic polymer; (d) 0.1-30 wt.% of soluble salts as above and/or cationic surfactant; (e) 0.1-20 wt.% of acid; (f) 0-10 wt.% of complex-former; (g) 0-20 wt.% of additives as in (ii); and (h) 0-90 wt.% of water; (vi) a solid cleaning formulation containing: (a) 0.05-30 wt.% of (I); (b) 0.1-40 wt.% of non-ionic and/or anionic surfactant; (c) 0-10 wt.% of cationic polymer; (d) 0-20 wt.% of salts and/or cationic surfactant as above; (e) 0-80 wt.% of inorganic builder, regulator and/or abrasive; (f) 0-20 wt.% of complex former and/or organic co-builder; (g) 0-10 wt.% of additives such as brighteners, wax, oils, perfume, corrosion inhibitors, bleaching agents, activators and/or catalysts and dyes; and (h) water (to make up 100 wt.%); (vii) a liquid after-rinse and impregnating formulation containing: (a) 0.05-30 wt.% of (I); (b) 0.1-30 wt.% of non-ionic or anionic surfactant; (c) 0-10 wt.% of acid, preferably a carboxylic acid; (d) 0-10 wt.% of cationic polymer; (e) 0-20 wt.% of salts and/or cationic surfactant as above; (f) 0-10 wt.% of additives such as thickeners, complex-formers, solvents, oils, waxes, hydrotropic agents, foam suppressants, polycarboxylic acids, silicones, brighteners, perfume and/or dyes; and (g) 0-90 wt.% of water.

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