

Title (en)  
METAL COMPLEXES-CONTAINING DISHWASHING DETERGENTS

Title (de)  
GESCHIRRSPÜLMITTEL, DIE METALLKOMPLEXE ENTHALTEN

Title (fr)  
DÉTERGENTS POUR LAVE-VAISSELLE CONTENANT DES COMPLEXES MÉTALLIQUES

Publication  
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Application  
**EP 21801459 A 20211025**

Priority  
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• EP 2021079546 W 20211025

Abstract (en)  
[origin: WO2022100995A1] The invention relates to dishwashing detergents that contain a metal complex of the general formula (I), (Aq<sup>+</sup>)<sub>p</sub>[Ms<sup>+</sup>Lm-](Xo<sup>-</sup>)<sub>r</sub> (I) wherein q is 1 or 2 and Aq<sup>+</sup> represents a cation, selected from alkali metal cations with q = 1, ½ alkaline earth cations with q = 2 and ammonium ions with q = 1, Ms<sup>+</sup> represents an aluminum ion, a transition metal ion or a lanthanoid metal ion, s is a number from 1 to 5, L represents a ligand of the formula (II), in which every R1 and R2 independently of each other is selected from H, unsubstituted or substituted, linear or branched C1-20 alkyl, unsubstituted or substituted, linear or branched C1-20 heteroalkyl, unsubstituted or substituted aryl, unsubstituted or substituted heteroaryl, unsubstituted or substituted, linear or branched C2-20 alkenyl, unsubstituted or substituted, linear or branched C2-20 heteroalkenyl and unsubstituted or substituted, linear or branched C2-20 alkynyl, unsubstituted or substituted, linear or branched alkylaryl, unsubstituted or substituted, linear or branched alkylheteroaryl, every R3 independently from each other represents CH2COOH or CH2COO<sup>-</sup>, n is 0 or 1, Xo<sup>-</sup> represents an anion, selected from F<sup>-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, I<sup>-</sup>, OH<sup>-</sup>, HSO3<sup>-</sup>, SO3<sup>2-</sup>, SO4<sup>2-</sup>, HSO4<sup>-</sup>, NO2<sup>-</sup>, NO3<sup>-</sup>, PO4<sup>3-</sup>, HPO4<sup>2-</sup>, H2PO4<sup>-</sup>, BF4<sup>-</sup>, PF6<sup>-</sup>, ClO4<sup>-</sup>, acetate, citrate, formate, glutarate, lactate, malate, malonate, oxalate, pyruvate, tartrate, methane sulfonate, methyl sulfate, p-toluene sulfate and succinate, m is a number from 0 to 5 and o is a number from 1 to 3, and p and r independently of each other represent a number from 0 to 6, with the proviso that the sum of s and the product of p and q is equal the sum of m and the product of r and o, and with the further proviso that the charge of formula (II) resulting from the residues R1, R2 and R3 is neutral or negative.

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