

Title (en)

Machine dishwashing composition containing polyaminoacids as builders.

Title (de)

Zusammensetzung für Geschirrspülmaschinen, die Polyaminosäuren als Gerüststoffe enthalten.

Title (fr)

Composition détergente pour le lavage en machine de la vaisselle contenant des acides aminés polymères en tant qu'adjuvants.

Publication

**EP 0561452 A1 19930922**

Application

**EP 93200670 A 19930309**

Priority

- CA 2091791 A 19930317
- EP 92200794 A 19920320

Abstract (en)

An improved phosphate-free, particularly phosphorus-free machine dishwashing composition comprises a non-phosphate builder, such as zeolite, alkalimetal citrate, alkalimetal carbonate and bicarbonate, and mixtures thereof, wherein the amount of carbonate and/or bicarbonate if present, does not exceed 50% by weight of the composition, and contains an effective amount of a biodegradable poly-amino acid compound of the formula: Poly (X)<sub>n</sub> wherein each X is independently aspartic acid or salts thereof, glutamic acid or salts thereof, glutamine, asparagine, or mixtures thereof; and n is 3 to 1000.

IPC 1-7

**C11D 3/00; C11D 3/37**

IPC 8 full level

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Citation (search report)

- [X] EP 0454126 A1 19911030 - MONTEDIPE SRL [IT]
- [Y] DE 3724460 A1 19880204 - LION CORP [JP]
- [Y] EP 0256366 A1 19880224 - BAYER AG [DE]
- [XP] EP 0511037 A1 19921028 - RHONE POULENC CHIMIE [FR]

Cited by

EP0987316A1; US5594077A; US6072025A; EP0736596A1; AU702040B2; US5770553A; US5520842A; DE4425951A1; EP0987318A1; EP0700987A3; US5610267A; KR20140088566A; RU2607085C2; US7094740B2; WO2011049945A2; US6245157B1; US7101833B2; US6463939B1; US9040278B2; US9040279B2; US8574374B2; EP2428572A2; US5540863A; EP0633310A1; FR2708279A1; US5643863A; EP0719317A4; CN105102602A; KR20150140718A; WO9423004A1; WO02061026A1; WO0046329A1; WO2013056996A1; WO9516020A1; WO9410282A1; WO2005012629A1; US7241726B2; US6524392B1; US8507243B2; US9994797B2; WO9963106A1; WO9716518A1; WO2014161786A1; WO9520030A1; WO2005037976A3; US7271138B2; US8323945B2; US8975056B2; US9090887B2

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