

Title (en)

Phosphate-free detergent builder.

Title (de)

Phosphatfreier Waschmittelbuilder.

Title (fr)

Agent de renforcement pour détergents sans phosphate.

Publication

EP 0289768 A2 19881109 (DE)

Application

EP 88104629 A 19880323

Priority

DE 3715051 A 19870506

Abstract (en)

The builder consists of a water-soluble silicate able to bind calcium ions, and of a mixture of two polyacrylic acids which have different viscosity numbers.

Abstract (de)

Der Waschmittelbuilder besteht aus einem wasserlöslichen, zum Binden von Calciumionen befähigtem Silikat sowie einem Gemisch zweier Acrylsäurepolymerisate, die unterschiedliche Viskositätszahlen aufweisen.

IPC 1-7

C11D 3/12; **C11D 3/37**

IPC 8 full level

C11D 3/12 (2006.01); **C11D 3/37** (2006.01)

CPC (source: EP KR US)

C11D 3/12 (2013.01 - KR); **C11D 3/128** (2013.01 - EP US); **C11D 3/37** (2013.01 - KR); **C11D 3/3761** (2013.01 - EP US)

Cited by

GB2234980A; EP0421664A3; WO2010109164A1

Designated contracting state (EPC)

AT BE CH DE ES FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0289768 A2 19881109; **EP 0289768 A3 19890906**; DE 3715051 A1 19881117; DK 244788 A 19881107; DK 244788 D0 19880505; FI 882074 A0 19880504; FI 882074 A 19881107; IN 170841 B 19920530; JP S63286494 A 19881124; KR 880014092 A 19881222; KR 900004495 B1 19900628; PT 87411 A 19890531; PT 87411 B 19920831; US 5076957 A 19911231

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EP 88104629 A 19880323; DE 3715051 A 19870506; DK 244788 A 19880505; FI 882074 A 19880504; IN 358CA1988 A 19880503; JP 10924688 A 19880506; KR 880005180 A 19880504; PT 8741188 A 19880505; US 47465890 A 19900206