

Title (en)

PHOSPHATE FREE AGENTS FOR AUTOMATIC DISH-WASHING

Publication

**EP 0186088 B1 19911106 (DE)**

Application

**EP 85116027 A 19851216**

Priority

DE 3447291 A 19841224

Abstract (en)

[origin: US4820440A] A detergent composition for dishwashers comprising anhydrous alkali carbonate, alkali metasilicate, and other, optional, ingredients, wherein the alkalis contain at least two different cations and phosphates are not present.

IPC 1-7

**C11D 3/00; C11D 7/04**

IPC 8 full level

**C11D 3/00** (2006.01); **C11D 3/08** (2006.01); **C11D 3/10** (2006.01); **C11D 7/04** (2006.01)

CPC (source: EP US)

**C11D 3/044** (2013.01 - EP US); **C11D 3/08** (2013.01 - EP US); **C11D 3/10** (2013.01 - EP US)

Cited by

EP0634478A1; EP0706559A4; EP0679177A4; EP0679178A4; EP0364067A3; WO9115568A1; WO9512654A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI NL

DOCDB simple family (publication)

**EP 0186088 A2 19860702; EP 0186088 A3 19891115; EP 0186088 B1 19911106**; AT E69262 T1 19911115; DE 3447291 A1 19860626;  
DE 3584621 D1 19911212; US 4820440 A 19890411

DOCDB simple family (application)

**EP 85116027 A 19851216**; AT 85116027 T 19851216; DE 3447291 A 19841224; DE 3584621 T 19851216; US 12572487 A 19871130