

Title (en)  
Builder for washing agents.

Title (de)  
Waschmittelbuilder.

Title (fr)  
Adjuvant actif pour agents de lavage.

Publication  
**EP 0368364 B1 19940601**

Application  
**EP 89123122 A 19871126**

Priority  
• DE 3702763 A 19870130  
• DE 3735618 A 19871021  
• EP 87117460 A 19871126

Abstract (en)  
[origin: US4883607A] Granulated detergent builders, are disclosed consisting essentially of: 70 to 80 weight percent of water-insoluble silicate, capable of binding calcium, in the form of a finely divided, bound-water-containing, synthetically produced, water-insoluble, crystalline compound of the general formula  $(\text{Kat})_2/n\text{O})_x.\text{Me}_2\text{O}_3.(\text{SiO}_2)_y$  (I), in which Kat represents an n-valent cation which is exchangeable with calcium, x a number from 0.7 to 1.5, Me boron or aluminum and y a number from 0.8 to 6, 2 to 3 weight percent of nonionic surfactant, 0 to 1 weight percent of alkali, 2.4 to 5 weight percent of carboxymethylcellulose and/or methylcellulose, and the balance water.

IPC 1-7  
**C11D 3/12**; **C11D 3/22**

IPC 8 full level  
**C11D 3/12** (2006.01); **C11D 3/22** (2006.01); **C11D 3/60** (2006.01)

CPC (source: EP US)  
**C11D 3/128** (2013.01 - EP US); **C11D 3/225** (2013.01 - EP US)

Designated contracting state (EPC)  
AT BE CH DE ES FR GB IT LI NL

DOCDB simple family (publication)  
**EP 0279038 A1 19880824**; **EP 0279038 B1 19910102**; AT E106443 T1 19940615; DE 3735618 A1 19880811; DE 3766950 D1 19910207; DE 3789971 D1 19940707; DK 170031 B1 19950501; DK 170716 B1 19951218; DK 19995 A 19950224; DK 29588 A 19880731; DK 29588 D0 19880122; EP 0368364 A2 19900516; EP 0368364 A3 19900606; EP 0368364 B1 19940601; ES 2020253 B3 19910801; ES 2053935 T3 19940801; JP H0660319 B2 19940810; JP S63193996 A 19880811; US 4883607 A 19891128

DOCDB simple family (application)  
**EP 87117460 A 19871126**; AT 89123122 T 19871126; DE 3735618 A 19871021; DE 3766950 T 19871126; DE 3789971 T 19871126; DK 19995 A 19950224; DK 29588 A 19880122; EP 89123122 A 19871126; ES 87117460 T 19871126; ES 89123122 T 19871126; JP 1748988 A 19880129; US 14794388 A 19880125