

Title (en)  
GRANULAR LAUNDRY DETERGENT AND DETERGENT BUILDER

Title (de)  
KÖRNIGES WASCHMITTEL UND WASCHMITTELBUILDER

Title (fr)  
DETERGENT DE BLANCHISSAGE EN POUDRE ET ADJUVANT DE DETERGENT

Publication  
**EP 0617733 B1 19970423 (EN)**

Application  
**EP 92925246 A 19921117**

Priority

- US 9209854 W 19921117
- US 81019791 A 19911219
- US 85160092 A 19920316
- US 87828192 A 19920504

Abstract (en)  
[origin: WO9312217A1] A phosphate-free granular laundry detergent having a cleaning performance comparable to that of a premium phosphate-containing laundry detergent comprises: (A) 1-30 % by weight of a surfactant, (B) 1-50 % by weight of a sodium aluminum silicate detergent builder, (C) 1-20 % by weight of sodium silicate, (D) 0.1-5 % by weight of an anti-redeposition agent, and (E) 10-80 % by weight of inorganic filler, the surfactant consisting of: (1) a mixture of 20-98 % by weight of an ethoxylated fatty alcohol, 1-75 % by weight of an alkali metal or ammonium salt of an alkylbenzene sulfonate in which the alkyl group contains 10-18 carbons, and 1-20 % by weight of an amine oxide corresponding to the formula RR'R"NO in which R is a primary alkyl group containing 8-24 carbons; R' is methyl, ethyl, or 2-hydroxyethyl; and R" is independently selected from methyl, ethyl, 2-hydroxyethyl, and primary alkyl groups containing 8-24 carbons, or (2) a mixture of 85-98 % by weight of the ethoxylate, 1-12 % by weight of a fatty acid soap, and 1-6 % by weight of the amine oxide.

IPC 1-7  
**C11D 3/12**; **C11D 1/75**

IPC 8 full level  
**C11D 1/83** (2006.01); **C11D 3/00** (2006.01); **C11D 3/08** (2006.01); **C11D 3/12** (2006.01); **C11D 10/04** (2006.01); **C11D 1/22** (2006.01); **C11D 1/72** (2006.01); **C11D 1/75** (2006.01)

CPC (source: EP)  
**C11D 1/83** (2013.01); **C11D 3/0036** (2013.01); **C11D 3/08** (2013.01); **C11D 3/128** (2013.01); **C11D 10/04** (2013.01); **C11D 1/22** (2013.01); **C11D 1/72** (2013.01); **C11D 1/75** (2013.01)

Cited by  
US7226899B2

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**WO 9312217 A1 19930624**; CA 2126238 A1 19930624; DE 69219358 D1 19970528; DE 69219358 T2 19970807; EP 0617733 A1 19941005; EP 0617733 B1 19970423; JP H07509501 A 19951019

DOCDB simple family (application)  
**US 9209854 W 19921117**; CA 2126238 A 19921117; DE 69219358 T 19921117; EP 92925246 A 19921117; JP 51090892 A 19921117