

Title (en)  
Heavy duty laundry detergent

Title (de)  
Vollwaschmittel für Wäsche

Title (fr)  
Détergent universel pour le linge

Publication  
**EP 0421327 B1 19951220 (EN)**

Application  
**EP 90118815 A 19901001**

Priority  
US 41614389 A 19891002

Abstract (en)  
[origin: EP0421327A1] Free-flowing granular heavy duty laundry detergent is made by blending a composition to contain (i) a tert-amine oxide dihydrate having the formula  $R_1R_2R_3NO \cdot 2H_2O$  where  $R_1$  is a C8-24 alkyl,  $R_2$  is methyl, ethyl or a C8-24 alkyl and  $R_3$  is methyl or ethyl, (ii) a detergent builder (e.g., zeolite A) and optionally other conventional laundry detergent ingredients.

IPC 1-7  
**C11D 1/75**

IPC 8 full level  
**C11D 1/75** (2006.01); **C11D 11/00** (2006.01); **C11D 17/06** (2006.01)

CPC (source: EP)  
**C11D 1/75** (2013.01)

Cited by  
US6035869A; US5478500A; WO9855591A1; WO9312217A1; WO9516016A1; WO9855580A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 0421327 A1 19910410; EP 0421327 B1 19951220**; CA 2025973 A1 19910403; DE 69024305 D1 19960201; DE 69024305 T2 19960515; JP 2848536 B2 19990120; JP H03179096 A 19910805

DOCDB simple family (application)  
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