

Title (en)  
ACETONITRILE DERIVATIVES FORMULATED IN PARTICULATE FORM AS BLEACH ACTIVATORS IN SOLID DETERGENTS

Title (de)  
TEILCHENFÖRMIG KONFEKTIONIERTER ACETONITRIL-DERIVATE ALS BLEICHAKTIVATOREN IN FESTEN REINIGUNGSMITTELN

Title (fr)  
DERIVES D'ACETONITRILE CONFECTIONNÉES SOUS FORME DE PARTICULES UTILISÉES COMME ACTIVATEURS DE BLANCHIMENT DANS DES DETERGENTS SOLIDES

Publication  
**EP 1141211 B1 20040225 (DE)**

Application  
**EP 99962240 A 19991208**

Priority  

- DE 19857596 A 19981215
- EP 9909622 W 19991208
- US 12691999 P 19990329

Abstract (en)  
[origin: WO0036061A2] The aim of the invention is to improve the oxidising and bleaching effect of inorganic peroxygen compounds in the machine-dishwashing in particular, in such a manner that they remain stable in storage. This was achieved essentially using compounds of the following formula, formulated in particulate form:  $R<1>R<2>R<3>N<+>CH_2CN X<->$ ; wherein  $R<1>$ ,  $R<2>$  and  $R<3>$ , independently of each other, are an alkyl-, alkenyl or aryl group with 1 to 18 C-atoms, whereby the groups  $R<2>$  and  $R<3>$  can also be part of the heterocycle comprising the N-atom and optionally, other heteroatoms; and X is a charge-equalising anion. The inventive agents for washing dishes especially by machine contain approximately 1 wt. % to 10 wt. % of a bleach-reinforcing active agent of this type.

IPC 1-7  
**C11D 3/39**; **C11D 3/12**; **C11D 17/00**

IPC 8 full level  
**C11D 1/62** (2006.01); **C11D 3/08** (2006.01); **C11D 3/12** (2006.01); **C11D 3/39** (2006.01); **C11D 3/395** (2006.01); **C11D 17/00** (2006.01); **C11D 17/06** (2006.01)

CPC (source: EP KR US)  
**C11D 3/046** (2013.01 - KR); **C11D 3/124** (2013.01 - EP US); **C11D 3/168** (2013.01 - KR); **C11D 3/3925** (2013.01 - EP US); **C11D 3/3927** (2013.01 - KR); **C11D 3/3935** (2013.01 - EP KR US); **C11D 17/0034** (2013.01 - EP US); **C11D 17/0073** (2013.01 - EP KR US); **C11D 17/0078** (2013.01 - EP US)

Designated contracting state (EPC)  
DE ES FR GB IT NL

DOCDB simple family (publication)  
**WO 0036061 A2 20000622**; **WO 0036061 A3 20000914**; EP 1141211 A2 20011010; EP 1141211 B1 20040225; ES 2216609 T3 20041016; JP 2002532615 A 20021002; KR 100630289 B1 20060929; KR 20010080769 A 20010822; US 2002032139 A1 20020314; US 6407045 B1 20020618

DOCDB simple family (application)  
**EP 9909622 W 19991208**; EP 99962240 A 19991208; ES 99962240 T 19991208; JP 2000588312 A 19991208; KR 20017007551 A 20010615; US 96916901 A 20011002