

Title (en)  
MACHINE DISHWASHER DETERGENT

Title (de)  
MASCHINELLES GESCHIRRSPÜLMITTEL

Title (fr)  
DÉTERGENTS POUR LAVE-VAISSELLE

Publication  
**EP 2358853 A1 20110824 (DE)**

Application  
**EP 09764241 A 20091201**

Priority  
• EP 2009066102 W 20091201  
• DE 102008060471 A 20081205

Abstract (en)  
[origin: WO2010063690A1] Machine dishwasher detergents comprising builder(s), enzyme(s), and a) a nonionic surfactant A of the general formula  $R_1O(AlkO)_xM(OAlk)_yOR_2$  in which:  $R_1$  and  $R_2$  are each independently a branched or unbranched, saturated or unsaturated, optionally hydroxylated alkyl radical having 4 to 22 carbon atoms;  $Alk$  is a branched or unbranched alkyl radical having 2 to 4 carbon atoms;  $x$  and  $y$  are each independently values from 1 to 70; and  $M$  is an alkyl radical from the group of  $CH_2$ ,  $CHR_3$ ,  $CR_3R_4$ ,  $CH_2CHR_3$  and  $CHR_3CHR_4$ , where  $R_3$  and  $R_4$  are each independently a branched or unbranched, saturated or unsaturated alkyl radical having 1 to 18 carbon atoms, b) a nonionic surfactant B different than the nonionic surfactant A; c) an anionic copolymer C, are notable for an improved drying and rinsing outcome.

IPC 8 full level  
**C11D 1/72** (2006.01); **C11D 1/825** (2006.01); **C11D 3/37** (2006.01); **C11D 3/386** (2006.01)

CPC (source: EP US)  
**C11D 1/825** (2013.01 - EP US); **C11D 3/3757** (2013.01 - EP US); **C11D 3/378** (2013.01 - EP US); **C11D 3/386** (2013.01 - EP US);  
**C11D 1/721** (2013.01 - EP US)

Citation (search report)  
See references of WO 2010063690A1

Cited by  
DE102011086639A1; DE102012223339A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**DE 102008060471 A1 20100610**; EP 2358853 A1 20110824; EP 2358853 B1 20170208; ES 2622984 T3 20170710; PL 2358853 T3 20170831; US 2011232692 A1 20110929; US 8349784 B2 20130108; WO 2010063690 A1 20100610

DOCDB simple family (application)  
**DE 102008060471 A 20081205**; EP 09764241 A 20091201; EP 2009066102 W 20091201; ES 09764241 T 20091201; PL 09764241 T 20091201; US 201113151487 A 20110602