

Title (en)
CLEANING COMPOSITION

Title (de)
REINIGUNGSMITTEL

Title (fr)
DÉTERGENTS

Publication
EP 2364351 B1 20170517 (DE)

Application
EP 09763945 A 20091201

Priority
• EP 2009066100 W 20091201
• DE 102008060470 A 20081205

Abstract (en)
[origin: WO2010063688A1] Phosphate-free machine dishwasher detergents comprising builder, bleach, and additionally a) hydrophobically modified copolymer A comprising monomers ai) from the group of the mono- or polyunsaturated sulphonic acids, b) non-hydrophobically modified copolymer B comprising monomers bi) from the group of the mono- or polyunsaturated sulphonic acids, c) nonionic surfactant C, feature outstanding scale inhibition, and good cleaning and rinsing performance.

IPC 8 full level
C11D 1/72 (2006.01); **C11D 3/20** (2006.01); **C11D 3/37** (2006.01); **C11D 3/39** (2006.01)

CPC (source: EP US)
C11D 1/72 (2013.01 - EP US); **C11D 1/721** (2013.01 - EP US); **C11D 3/10** (2013.01 - EP US); **C11D 3/2086** (2013.01 - EP US); **C11D 3/378** (2013.01 - EP US); **C11D 3/39** (2013.01 - EP US)

Citation (opposition)
Opponent : Unilever NV
• WO 2010063688 A1 20100610 - HENKEL AG & CO KGAA [DE], et al
• WO 2008028896 A2 20080313 - HENKEL KGAA [DE], et al
• WO 2008095563 A1 20080814 - HENKEL AG & CO KGAA [DE], et al
• WO 2005090541 A1 20050929 - PROCTER & GAMBLE [US], et al
• WO 2007052064 A1 20070510 - RECKITT BENCKISER NV [NL], et al
• EP 1346957 A2 20030924 - NAT STARCH CHEM INVEST [US]
• WO 0220708 A1 20020314 - UNILEVER PLC [GB], et al
• ALAN TOMLINSON ET AL.: "Handbook for Cleaning/Decontamination of Surfaces", 2007, article "A Review of Key Ingredients used in Past and Present Auto-Dishwashing Formulations and the Physico-Chemical Processes They Facilitate", pages: 197 - 256, XP055465365

Cited by
CN107075418A

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 102008060470 A1 20100610; EP 2364351 A1 20110914; EP 2364351 B1 20170517; ES 2633955 T3 20170926; HU E034371 T2 20180228; PL 2364351 T3 20171031; US 2011226288 A1 20110922; US 8242068 B2 20120814; WO 2010063688 A1 20100610

DOCDB simple family (application)
DE 102008060470 A 20081205; EP 09763945 A 20091201; EP 2009066100 W 20091201; ES 09763945 T 20091201; HU E09763945 A 20091201; PL 09763945 T 20091201; US 201113151467 A 20110602