

Title (en)
MIXTURE OF SURFACTANTS FOR THE CLEANING OF HARD SURFACES

Publication
EP 0054895 B1 19840725 (DE)

Application
EP 81110472 A 19811216

Priority
DE 3048642 A 19801223

Abstract (en)
[origin: CA1160534A] HOE 80/F 931 of the disclosure: A detergent composition is described which is particularly suitable for the mechanical cleaning of hard surfaces, in particular glass, porcelain and the like, in a cleaning liquor which is within the alkaline range. This detergent composition is composed of A) a nonionic surfactant selected from the group comprising polyalkylene glycol monoalkyl ethers containing ethylene oxide and propylene oxide units, polyglycol ether formals containing ethylene oxide units and, if appropriate, propylene oxide units, or polyalkylene glycol dialkyl ethers containing ethylene oxide units and, if appropriate, propylene oxide units, and B) a selected quaternary ammonium compound as a cationic surfactant. These compositions are particularly suitable for industrial crockery and bottle washing plants which are operated within the highly alkaline pH range and with vigorous mechanical agitation of the liquor.

IPC 1-7
C11D 1/835; **C11D 1/72**; **C11D 3/00**

IPC 8 full level
C11D 1/72 (2006.01); **C11D 1/835** (2006.01); **C11D 3/00** (2006.01); **C11D 17/00** (2006.01); **C11D 1/62** (2006.01); **C11D 1/722** (2006.01)

CPC (source: EP US)
C11D 1/721 (2013.01 - EP US); **C11D 1/835** (2013.01 - EP US); **C11D 1/8355** (2013.01 - EP US); **C11D 1/62** (2013.01 - EP US); **C11D 1/722** (2013.01 - EP US)

Cited by
WO2009050035A1; EP0235774A3; AU2008313901B2; US5750486A; US5691300A; EP2253741A3; WO2021224018A1; WO9117233A1; WO2007087846A1; WO0050551A1; US6187737B1; US9464259B2; WO9510586A1; WO9502666A1; WO9845392A1; WO9623050A1; WO9855578A1

Designated contracting state (EPC)
AT BE CH DE FR GB IT LI NL SE

DOCDB simple family (publication)
EP 0054895 A1 19820630; **EP 0054895 B1 19840725**; AT E8659 T1 19840815; CA 1160534 A 19840117; DE 3048642 A1 19820715; DE 3165129 D1 19840830; JP H0345120 B2 19910710; JP S58109598 A 19830629; US 4443363 A 19840417

DOCDB simple family (application)
EP 81110472 A 19811216; AT 81110472 T 19811216; CA 392879 A 19811222; DE 3048642 A 19801223; DE 3165129 T 19811216; JP 20627781 A 19811222; US 33076781 A 19811214