

Title (en)  
Detergent composition.

Title (de)  
Waschmittelzusammensetzung.

Title (fr)  
Composition détergente.

Publication  
**EP 0554943 A2 19930811 (EN)**

Application  
**EP 93200217 A 19930128**

Priority  
• EP 92302290 A 19920317  
• GB 9202237 A 19920203

Abstract (en)  
A chlorine bleach-free aqueous liquid machine dishwashing composition having solution pH 7-11 contains proteolytic enzyme, detergency builder, sodium silicate having SiO<sub>2</sub>:Na<sub>2</sub>O ratio of from 2.0-3.2 and organic surfactant which comprises (i) glycoside surfactant, (ii) anionic sulphate or sulphonate including a C8 to C22 alkyl or alkenyl group or (iii) ethoxylated C6 to C16 fatty alcohol with HLB of at least 10.5, or a mixture of (i), (ii) and/or (iii). If (iii) is used without (ii) it must be an ethoxylated C6 to C12 alcohol, or glycoside surfactant must also be present. Proteolytic enzyme plus the specified surfactant gives a synergistic improvement in removal of proteinaceous soil.

IPC 1-7  
**C11D 1/83; C11D 3/00; C11D 3/08**

IPC 8 full level  
**C11D 1/14** (2006.01); **C11D 1/22** (2006.01); **C11D 1/28** (2006.01); **C11D 1/66** (2006.01); **C11D 1/72** (2006.01); **C11D 3/08** (2006.01); **C11D 3/386** (2006.01); **C11D 3/39** (2006.01); **C11D 17/00** (2006.01)

CPC (source: EP)  
**C11D 1/146** (2013.01); **C11D 1/22** (2013.01); **C11D 1/28** (2013.01); **C11D 1/662** (2013.01); **C11D 1/72** (2013.01); **C11D 3/08** (2013.01); **C11D 3/38618** (2013.01); **C11D 3/3947** (2013.01)

Cited by  
US5705465A; EP0872541A3; EP0634480A1; US5695575A; AU727942B2; EP0755999A1; EP0756000A1; EP0756001A1; WO2011049945A2; US9040278B2; US9040279B2; EP2428572A2; US8507243B2; WO9713833A1; WO9923036A1; WO2012123450A1; WO2012123452A1; WO9713832A1; WO9414941A1; WO2004111170A1; US8323945B2; US8975056B2; US9090887B2; WO9614374A1; WO9804239A3

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

DOCDB simple family (publication)  
**EP 0554943 A2 19930811; EP 0554943 A3 19931208; EP 0554943 B1 19980617**; CA 2088230 A1 19930804; DE 69319158 D1 19980723; DE 69319158 T2 19981029; ES 2118181 T3 19980916; JP H05271690 A 19931019; JP H0830199 B2 19960327; NO 930342 D0 19930201; NO 930342 L 19930804

DOCDB simple family (application)  
**EP 93200217 A 19930128**; CA 2088230 A 19930127; DE 69319158 T 19930128; ES 93200217 T 19930128; JP 1642393 A 19930203; NO 930342 A 19930201