

Title (en)

Nonaqueous liquid automatic dishwasher detergent composition containing a dual bleach system.

Title (de)

Nichtwässrige flüssige, ein Doppelbleichsystem enthaltende Reinigungsmittelzusammensetzung für automatische Geschirrspülmaschinen.

Title (fr)

Composition détergente liquide non-aqueuse pour le lavage automatique de la vaisselle contenant deux systèmes de blanchiment.

Publication

EP 0423014 A2 19910417 (EN)

Application

EP 90402794 A 19901008

Priority

US 41924289 A 19891010

Abstract (en)

The application is directed to a nonaqueous liquid automatic dishwasher detergent composition containing a dual bleach system. The composition contains a nonaqueous organic carrier liquid, a chlorine bleach source and a bromide compound. In the wash bath the chlorine source reacts with water to form hypochlorite and the bromide compound reacts with a portion of the hypochlorite to form hypobromite. The active ingredients of the dual bleach system are the hypochlorite and hypobromite which provide improved cleaning performance against both proteinaceous and starchy carbohydrate soils. The dish washing compositions comprise a nonaqueous organic carrier liquid, a surfactant, a chlorine bleach source and a bromide compound, are stable in storage and are readily dispersible in water.

IPC 1-7

C11D 3/395; C11D 17/00

IPC 8 full level

C11D 3/395 (2006.01); **C11D 17/00** (2006.01)

CPC (source: EP)

C11D 3/3956 (2013.01); **C11D 17/0004** (2013.01)

Cited by

US5618465A; AU678378B2; US2014116918A1; US8883706B2; EP0565788A1; EP0517312A1; GR920100225A; TR26589A; US2014116917A1; US8883705B2; CN115746968A; US8933010B2; WO9924539A1; WO9403580A1; WO9961571A1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB IT LI LU NL SE

DOCDB simple family (publication)

EP 0423014 A2 19910417; EP 0423014 A3 19910724; EP 0423014 B1 19950329; AT E120484 T1 19950415; AU 6325590 A 19910418; AU 635774 B2 19930401; CA 2027199 A1 19910411; DE 69018190 D1 19950504; NZ 235491 A 19920428

DOCDB simple family (application)

EP 90402794 A 19901008; AT 90402794 T 19901008; AU 6325590 A 19900926; CA 2027199 A 19901009; DE 69018190 T 19901008; NZ 23549190 A 19900927