

Title (en)
PHOSPHATE-FREE AUTOMATIC DISHWASHING DETERGENT COMPOSITION

Title (de)
PHOSPHATFREIE SPÜLMITTELZUSAMMENSETZUNG FÜR GESCHIRRSPÜLAUTOMAT

Title (fr)
COMPOSITION DE DÉTERGENT DE LAVE-VAISSELLE AUTOMATIQUE SANS PHOSPHATE

Publication
EP 3622049 B1 20230816 (EN)

Application
EP 18723012 A 20180514

Priority
• EP 17170802 A 20170512
• EP 2018062286 W 20180514

Abstract (en)
[origin: WO2018206812A1] The invention relates to an automatic dishwashing detergent composition consisting of: · 20-80 wt.% of builder; · 5-25 wt.% of bleach component; · 1-10 wt.% of a graft copolymer having a polysaccharide backbone and one or more side chains of one or more synthetic monomeric units; · 1-15 wt.% nonionic surfactant; · 0-60 wt.% of one or more other detergent ingredients; wherein the graft copolymer and the builder are present in a weight ratio of copolymer to builder of 1:50 to 1:4; and wherein the builder contains at least 20% citrate by weight of the builder and at least 25% carbonate by weight of the builder, and the builder is composed of: a) not more than 70 wt.% of a hydroxycarboxylate sequestering builder selected from citrate, tartrate, gluconate and combinations thereof; b) not more than 80 wt.% of precipitating builder selected from carbonate, silicate and combinations thereof; c) 0-25 wt.% of one or more other builders; wherein citrate and carbonate together constitute at least 50 wt.% of the builder; and wherein citrate and carbonate are present in a molar ratio of citrate : carbonate of 0.1 to 1.0. The ADW detergent composition of the present invention produces very good cleaning results with minimal spotting and film-forming. The detergent composition also offers the advantage that it is less prone to give rise to glassware corrosion.

IPC 8 full level
C11D 1/72 (2006.01); **C11D 1/66** (2006.01); **C11D 1/722** (2006.01); **C11D 3/08** (2006.01); **C11D 3/10** (2006.01); **C11D 3/37** (2006.01); **C11D 3/39** (2006.01); **C11D 3/395** (2006.01); **C11D 17/00** (2006.01)

CPC (source: EP)
C11D 1/66 (2013.01); **C11D 1/721** (2013.01); **C11D 3/08** (2013.01); **C11D 3/10** (2013.01); **C11D 3/3788** (2013.01); **C11D 3/39** (2013.01)

Designated contracting state (EPC)
AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2018206812 A1 20181115; EP 3622049 A1 20200318; EP 3622049 B1 20230816; EP 3622049 C0 20230816; ES 2954295 T3 20231121

DOCDB simple family (application)
EP 2018062286 W 20180514; EP 18723012 A 20180514; ES 18723012 T 20180514