

Title (en)

LIMESCALE REMOVING COMPOSITION

Title (de)

ZUSAMMENSETZUNG ZUM ENTFERNEN VON KESSELSTEIN

Title (fr)

COMPOSITION PERMETTANT D'ENLEVER DES DEPOTS CALCAIRES

Publication

EP 0730628 B1 19980325 (EN)

Application

EP 95900745 A 19941112

Priority

- EP 9403790 W 19941112
- GB 9324126 A 19931124
- GB 9412377 A 19940621

Abstract (en)

[origin: WO9514756A1] The invention provides limescale-removing compositions of pH 1-4, comprising maleic acid, a nonionic surfactant, an anionic surfactant, a perfume and an alpha-hydroxy carboxylic acid (preferably citric acid). It is believed that the combination of alpha-hydroxy carboxylic acid with maleic acid is less toxic and less prone to decomposition than an equivalent amount of maleic acid, i.e. an amount which provides comparable limescale-removing performance. However, it is also believed that the alpha-hydroxy carboxylic acid interacts with the nonionic surfactant to destabilise the product in the absence of the anionic surfactant. Thus, there is believed to be a synergistic interaction between the components which provides a stable and effective composition containing the alpha-hydroxy fatty acid as a partial replacer for the maleic acid.

IPC 1-7

C11D 3/20; C11D 1/83

IPC 8 full level

C11D 1/83 (2006.01); **C11D 3/20** (2006.01); **C11D 1/14** (2006.01); **C11D 1/72** (2006.01)

CPC (source: EP)

C11D 1/83 (2013.01); **C11D 3/2082** (2013.01); **C11D 3/2086** (2013.01); **C11D 1/143** (2013.01); **C11D 1/72** (2013.01)

Designated contracting state (EPC)

CH DE ES FR GB IT LI NL SE

DOCDB simple family (publication)

WO 9514756 A1 19950601; AU 678313 B2 19970522; AU 8143694 A 19950613; BR 9408132 A 19970805; CA 2175677 A1 19950601;
DE 69409254 D1 19980430; DE 69409254 T2 19980716; EP 0730628 A1 19960911; EP 0730628 B1 19980325; ES 2113723 T3 19980501

DOCDB simple family (application)

EP 9403790 W 19941112; AU 8143694 A 19941112; BR 9408132 A 19941112; CA 2175677 A 19941112; DE 69409254 T 19941112;
EP 95900745 A 19941112; ES 95900745 T 19941112