

Title (en)
Limescale removing composition

Title (de)
Zusammensetzung zum Entfernen von Kesselstein

Title (fr)
Composition pour enlever le tartre

Publication
EP 0496188 B1 19971022 (EN)

Application
EP 91870011 A 19910122

Priority
EP 91870011 A 19910122

Abstract (en)
[origin: EP0496188A1] Cleaning compositions for hard surfaces are described which comprise from 1% to 15% by weight of the total composition of a nonionic surfactant or mixtures thereof, and from 4% to 25% by weight of the total composition of maleic acid. The compositions have an pH as is of from 1.0 to 4.0. These compositions are effective in removing limescale from hard surfaces.

IPC 1-7
C11D 3/20; C11D 1/66

IPC 8 full level
C11D 1/72 (2006.01); **C11D 3/20** (2006.01); **C11D 17/08** (2006.01)

CPC (source: EP)
C11D 1/72 (2013.01); **C11D 3/2082** (2013.01)

Citation (examination)
• US 3277008 A 19661004 - HEIT ALLYN H
• EP 0411708 A2 19910206 - COLGATE PALMOLIVE CO [US]

Cited by
EP0758017A1; AU678313B2; EP0957156A1; TR26294A; EP0616028A1; DE29511365U1; EP0666303A1; US5981455A; EP0601990A1; US5384063A; US5399280A; US5607913A; TR26094A; EP0666306A1; EP0616026A1; EP0616027A1; DE19525604A1; DE19525604C2; US5877135A; US5583265A; US5612308A; US5698041A; TR26594A; EP1679363A1; WO9960086A1; WO9421772A1; WO9514756A1; US7153817B2; US6537957B1

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

DOCDB simple family (publication)
EP 0496188 A1 19920729; EP 0496188 B1 19971022; AR 244786 A1 19931130; AT E159542 T1 19971115; BR 9205495 A 19940301; CA 2100096 A1 19920723; CA 2100096 C 20010116; DE 69128025 D1 19971127; DE 69128025 T2 19980416; DK 0496188 T3 19971215; ES 2108040 T3 19971216; GR 3025119 T3 19980130; JP 3217356 B2 20011009; JP H06505293 A 19940616; MX 9200253 A 19920701; TR 25673 A 19930701; WO 9213058 A1 19920806

DOCDB simple family (application)
EP 91870011 A 19910122; AR 32166292 A 19920122; AT 91870011 T 19910122; BR 9205495 A 19920121; CA 2100096 A 19920121; DE 69128025 T 19910122; DK 91870011 T 19910122; ES 91870011 T 19910122; GR 970402530 T 19971023; JP 50619292 A 19920121; MX 9200253 A 19920121; TR 4092 A 19920117; US 9200250 W 19920121