

Title (en)

An overbased metal sulphonate detergent

Title (de)

Überbasisches Metall-Sulphonat-Detergenz

Title (fr)

Détergent à base de sulfonate métallique surbasé

Publication

EP 2045314 A1 20090408 (EN)

Application

EP 08105207 A 20080902

Priority

- EP 07117915 A 20071004
- EP 08105207 A 20080902

Abstract (en)

An overbased metal sulphonate detergent having incorporated therein at least one friction modifier including at least one amine group.

IPC 8 full level

C10M 159/24 (2006.01); **C10M 163/00** (2006.01); **C10N 30/04** (2006.01); **C10N 30/06** (2006.01)

CPC (source: EP)

C10M 159/24 (2013.01); **C10M 163/00** (2013.01); **C10M 2215/042** (2013.01); **C10M 2219/046** (2013.01); **C10N 2010/04** (2013.01); **C10N 2030/04** (2013.01); **C10N 2030/06** (2013.01)

Citation (applicant)

- WO 9746643 A1 19971211 - EXXON CHEMICAL PATENTS INC [US], et al
- WO 9746644 A1 19971211 - EXXON CHEMICAL PATENTS INC [US], et al
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- US 4867890 A 19890919 - COLCLOUGH TERENCE [GB], et al

Citation (search report)

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- [X] GB 1513441 A 19780607 - INST FRANCAIS DU PETROLE
- [X] EP 0323087 A1 19890705 - EXXON CHEMICAL PATENTS INC [US]
- [X] US 3928216 A 19751223 - SAUNDERS PETER ANTHONY, et al
- [X] US 3429811 A 19690225 - ROBBINS MAX L, et al
- [A] EP 1018539 A2 20000712 - INFINEUM INTERNATINAL LIMITED [GB]
- [A] WO 9746644 A1 19971211 - EXXON CHEMICAL PATENTS INC [US], et al

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2045314 A1 20090408; EP 2045314 B1 20171108; CA 2640400 A1 20090404; CA 2640400 C 20151201; CN 101402898 A 20090408; CN 101402898 B 20140416; JP 2009091576 A 20090430; JP 2015098614 A 20150528; JP 5925929 B2 20160525; SG 151242 A1 20090430

DOCDB simple family (application)

EP 08105207 A 20080902; CA 2640400 A 20081003; CN 200810165981 A 20081006; JP 2008258900 A 20081003; JP 2015044270 A 20150306; SG 2008074601 A 20081003