

Title (en)

REVERSE EMULSION FOR HYDRAULIC FRACTURING

Title (de)

UMGEKEHRTE EMULSION FÜR HYDRAULISCHE FRAKTURIERUNG

Title (fr)

EMULSION INVERSE POUR LA FRACTURATION HYDRAULIQUE

Publication

**EP 3947558 A1 20220209 (FR)**

Application

**EP 20713647 A 20200327**

Priority

- FR 1903409 A 20190329
- EP 2020058703 W 20200327

Abstract (en)

[origin: CA3130959A1] The present application relates to a water-in-oil reverse emulsion comprising - an oil; - water; - at least one water-soluble cationic copolymer with an average molar mass of more than 3 million daltons, containing between 18 and 32 mol% of cationic monomers and 68 and 82 mol% of non-ionic monomers; - at least one inversion agent and at least one emulsifier, the weight ratio R of the total amount of inversion agent to the total amount of emulsifier being greater than 1.8, - the inversion agent being chosen from an ethoxylated nonylphenol, preferably having between 4 and 10 ethoxylations; an ethoxylated/propoxylated alcohol, preferably having ethoxylations/propoxylations so as to have a total carbon number between C12 and C25, an ethoxylated tridecyl alcohol and an ethoxylated/propoxylated fatty alcohol; - the emulsifying agent being chosen from sorbitan monooleate, polyethoxylated sorbitan esters or diethanolamide of tall oil fatty acids, and the use thereof in hydraulic fracturing.

IPC 8 full level

**C08L 33/26** (2006.01); **C08F 2/22** (2006.01); **C08F 2/24** (2006.01); **C08F 2/32** (2006.01); **C09K 8/03** (2006.01); **C09K 8/60** (2006.01); **C09K 8/88** (2006.01)

CPC (source: EP US)

**C08F 2/22** (2013.01 - EP); **C08F 2/24** (2013.01 - EP); **C08F 2/32** (2013.01 - EP); **C08F 220/56** (2013.01 - EP); **C08L 33/26** (2013.01 - EP); **C09K 8/64** (2013.01 - US); **C09K 8/68** (2013.01 - EP); **C09K 8/80** (2013.01 - US); **C09K 8/88** (2013.01 - EP); **E21B 43/267** (2013.01 - US); **C09K 2208/28** (2013.01 - EP)

C-Set (source: EP)

**C08F 220/56 + C08F 220/34**

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**FR 3094373 A1 20201002**; **FR 3094373 B1 20220107**; AR 118506 A1 20211020; AU 2020255203 A1 20211028; CA 3130959 A1 20201008; CN 113646381 A 20211112; CN 113646381 B 20231215; EP 3947558 A1 20220209; MX 2021011649 A 20211022; US 2022177773 A1 20220609; WO 2020201081 A1 20201008

DOCDB simple family (application)

**FR 1903409 A 20190329**; AR P200100850 A 20200327; AU 2020255203 A 20200327; CA 3130959 A 20200327; CN 202080025877 A 20200327; EP 2020058703 W 20200327; EP 20713647 A 20200327; MX 2021011649 A 20200327; US 202017599232 A 20200327