

Title (en)
IMPROVEMENTS IN FUELS

Title (de)
VERBESSERUNGEN IN BRENNSTOFFEN.

Title (fr)
AMÉLIORATIONS DANS LES CARBURANTS.

Publication
EP 2393905 B1 20161102 (EN)

Application
EP 10702900 A 20100204

Priority
• GB 2010050169 W 20100204
• GB 0902009 A 20090209

Abstract (en)
[origin: WO2010089594A1] There is provided a method of providing an improved biofuel, by the presence of an additive which is the reaction product of (i) a compound containing the segment -NR1 R2 where R1 represents a group containing from 4 to 44 carbon atoms and R2 represents a hydrogen atom or a group R1 (for example di- hydrogenated tallow amine) and (ii) a carboxylic acid having from 1 to 4 carboxylic acid groups or an acid anhydride or acid chloride thereof (for example phthalic acid or phthalic anhydride). The additives described combat problems arising from precipitation at temperatures above the cloud point.

IPC 8 full level
C10L 1/14 (2006.01); **C10L 1/16** (2006.01); **C10L 1/19** (2006.01); **C10L 1/197** (2006.01); **C10L 1/22** (2006.01); **C10L 1/224** (2006.01); **C10L 10/14** (2006.01)

CPC (source: EP KR US)
C10L 1/143 (2013.01 - EP KR US); **C10L 1/1616** (2013.01 - KR); **C10L 1/19** (2013.01 - KR); **C10L 1/1973** (2013.01 - KR); **C10L 1/221** (2013.01 - EP KR US); **C10L 1/224** (2013.01 - EP KR US); **C10L 10/14** (2013.01 - EP KR US); **C10L 1/1616** (2013.01 - EP US); **C10L 1/19** (2013.01 - EP US); **C10L 1/1973** (2013.01 - EP US)

Citation (opposition)
Opponent : BASF SE
• WO 2010089594 A1 20100812 - INNOSPEC LTD [GB], et al
• WO 2007147753 A2 20071227 - BASF AG [DE], et al
• WO 9622344 A1 19960725 - EXXON CHEMICAL LTD [GB], et al
• EP 1881054 A2 20080123 - CLARIANT INT LTD [CH]
• EP 0203812 A1 19861203 - EXXON RESEARCH ENGINEERING CO [US]
• EP 0413279 A1 19910220 - HOECHST AG [DE]
• WO 9304148 A1 19930304 - EXXON CHEMICAL PATENTS INC [US]
• CEN: "Automotive fuels - Diesel - Requirements and test methods", DIN EN 590:2009, pages 1 - 12, XP055409654, Retrieved from the Internet <URL:http://www.envirochem.hu/www.envirochem.hu/documents/EN_590_2009_hhV05.pdf>
• CEN: "Automotive fuels - Diesel - Requirements and test methods", DIN EN 590:2004, March 2004 (2004-03-01), pages 1 - 15, XP055410522
• D. SMITH: "Poor diesel fuel quality: a British Rail experience", PETROLEUM REVIEW, February 1990 (1990-02-01), pages 86 - 88, XP055409632
• OHSHIO, N. ET AL: "Storage stability of FAME blended diesel fuels", SAE TECHNICAL PAPER 2008-01-25 05, 6 October 2008 (2008-10-06), XP055409642
Opponent : INFINEUM INTERNATIONAL LIMITED
• WO 9410267 A1 19940511 - EXXON CHEMICAL PATENTS INC [US], et al
• EP 1932899 A1 20080618 - INFINEUM INT LTD [GB]
• WO 9318115 A1 19930916 - EXXON CHEMICAL PATENTS INC [US]
• EP 1491614 A1 20041229 - INFINEUM INT LTD [GB]
• WO 9623855 A1 19960808 - EXXON CHEMICAL PATENTS INC [US], et al
• T. COLEY ET AL: "New Laboratory Test for Predicting Low-temperature Operability of Diesel Fuels", JOURNAL OF THE INSTITUTE OF PETROLEUM, vol. 52, June 1966 (1966-06-01), pages 173 - 185, XP055401469
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WO 2010089594 A1 20100812; AR 075382 A1 20110330; AU 2010212136 A1 20110901; AU 2010212136 B2 20140116; BR PI1008120 A2 20160308; BR PI1008120 B1 20180515; CA 2751628 A1 20100812; CA 2751628 C 20170620; CN 102307974 A 20120104; CN 102307974 B 20150902; EP 2393905 A1 20111214; EP 2393905 B1 20161102; GB 0902009 D0 20090311; JP 2012517494 A 20120802; KR 101741851 B1 20170530; KR 20110116212 A 20111025; MX 2011008351 A 20110906; MY 155651 A 20151113; RU 2011136254 A 20130320; RU 2529426 C2 20140927; SG 173602 A1 20110929; US 2012030994 A1 20120209; US 2018258358 A1 20180913; US 2021403821 A1 20211230; ZA 201105576 B 20120926

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