

Title (en)

Blends of fatty acids with improved cold stability, containing comb polymers, and use thereof in fuel oils

Title (de)

Fettsäuremischungen verbesserter Kältestabilität, welche Kammpolymere enthalten, sowie deren Verwendung in Brennstoffölen

Title (fr)

Mélanges d'acides gras à stabilité à froid améliorée, lesquelles contiennent des polymères en peigne, ainsi que utilisation de ceux-là dans des huiles combustibles

Publication

**EP 1209216 A3 20030813 (DE)**

Application

**EP 01126256 A 20011106**

Priority

DE 10058357 A 20001124

Abstract (en)

[origin: CA2363699A1] Fuel oils having improved lubricity, comprising mixtures of fatty acids with comb polymers. The invention relates to low-temperature-stabilized fatty acid mixtures comprising A) from 10 to 99.99% by weight of fatty acid mixtures comprising A1) from 1 to 99% by weight of at least one saturated mono- or dicarboxylic acid having 6 to 50 carbon atoms, A2) from 1 to 99% by weight of at least one unsaturated mono- or dicarboxylic acid having 6 to 50 carbon atoms, and B) from 0.01 to 90% by weight of copolymers comprising B1) from 40 to 60 mol% of bivalent structural units of the formula (see formula I or II) where X = O or N - R1, in which a and b = 0 or 1 and a + b = 1, and B2) from 60 to 40 mol% of bivalent structural units of the formula -H2C-CR2R3- ~B2 and, if desired, B3) from 0 to 20 mol% of bivalent structural units derived from polyolefins, where the polyolefins can be derived from monoolefins having 3 to 5 carbon atoms, and in which a) R1 is an alkyl or alkenyl radical having from 10 to 40 carbon atoms or an alkoxyalkyl radical having from 1 to 100 alkoxy units and from 1 to 30 carbon atoms in the alkyl radical, and b) R3 is a radical of the formula OCOR4 or COOR4, in which R4 is C1-C24- alkyl, and c) the number of carbon atoms in the polyolefin molecules on which the structural units B3) are based is from 35 to 350, and d) R2 is hydrogen or methyl, and to the use of said mixtures for improving the lubrication properties of low-sulfur middle distillates.

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IPC 8 full level

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CPC (source: EP US)

**C10L 1/143** (2013.01 - EP US); **C10L 10/08** (2013.01 - EP US)

Citation (search report)

- [PX] WO 0138461 A1 20010531 - ASS OCTEL [GB], et al
- [PX] EP 1116780 A1 20010718 - CLARIANT GMBH [DE]
- [A] EP 1050573 A2 20001108 - INFINEUM USA LP [US]
- [A] US 5755834 A 19980526 - CHANDLER JOHN E [US]
- [A] WO 9804656 A1 19980205 - ELF ANTAR FRANCE [FR], et al
- [A] GB 2308129 A 19970618 - LUBRIZOL CORP [US]
- [A] WO 9936489 A1 19990722 - BAKER HUGHES INC [US]
- [DA] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 09 31 July 1998 (1998-07-31)
- [DA] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 04 30 April 1999 (1999-04-30)

Cited by

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