

Title (en)
MULTIFUNCTIONAL ADDITIVE COMPOSITIONS ENABLING MIDDLE DISTILLATES TO BE OPERABLE IN COLD CONDITIONS

Title (de)
ZUSAMMENSETZUNG VON MEHRZWECKZUSÄTZEN ZUR KÄLTEVERWENDBARKEIT DER MITTELDESTILLATE

Title (fr)
COMPOSITION D'ADDITIFS MULTIFONCTIONNELS D'OPERABILITE A FROID DES DISTILLATS MOYENS

Publication
EP 1252269 A1 20021030 (FR)

Application
EP 00993628 A 20001227

Priority
• FR 0003697 W 20001227
• FR 9916560 A 19991228

Abstract (en)
[origin: WO0148122A1] The invention concerns a multifunctional additive enabling fuels to be operable in cold conditions, consisting of copolymers of at least a dicarboxylic compound with at least an olefin, and whereon are grafted nitrogenous functions and/or esters of general formula (I) wherein: R1 and R2, and R4 and R5, R3 and R6 are hydrogen or alkyl radicals, and x is selected among the amine salts and N-alkylpolyalkylenepolyamines and their monohydroxylated and polyhydroxylated derivatives, N-alkylpolyalkylenepolyamine alkylesters and esters, and alkylamines and N-alkylpolyalkylenepolyamines.

IPC 1-7
C10L 1/22; C08F 222/38; C08F 210/00

IPC 8 full level
C08F 8/32 (2006.01); **C10L 1/236** (2006.01); **C10L 10/14** (2006.01); **C10L 1/234** (2006.01)

CPC (source: EP KR US)
C10L 1/22 (2013.01 - KR); **C10L 1/2364** (2013.01 - EP US); **C10L 1/2366** (2013.01 - EP US); **C10L 10/14** (2013.01 - EP US);
C10L 10/16 (2013.01 - EP US)

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 0148122 A1 20010705; AT E284938 T1 20050115; AU 5787801 A 20010709; CZ 299447 B6 20080730; DE 60016804 D1 20050120; DE 60016804 T2 20051215; EP 1252269 A1 20021030; EP 1252269 B1 20041215; ES 2234710 T3 20050701; FR 2802940 A1 20010629; FR 2802940 B1 20031107; HU 225070 B1 20060628; HU P0204536 A2 20030528; JP 2003518549 A 20030610; KR 100700416 B1 20070327; KR 20020074181 A 20020928; PL 191951 B1 20060731; PL 356098 A1 20040614; PT 1252269 E 20050429; RU 2002120507 A 20040110; RU 2257400 C2 20050727; US 2003163951 A1 20030904; US 2008244964 A1 20081009; US 7326262 B2 20080205; US 8100988 B2 20120124

DOCDB simple family (application)
FR 0003697 W 20001227; AT 00993628 T 20001227; AU 5787801 A 20001227; CZ 20022295 A 20001227; DE 60016804 T 20001227; EP 00993628 A 20001227; ES 00993628 T 20001227; FR 9916560 A 19991228; HU P0204536 A 20001227; JP 2001548641 A 20001227; KR 20027008391 A 20020627; PL 35609800 A 20001227; PT 00993628 T 20001227; RU 2002120507 A 20001227; US 14984402 A 20021118; US 2555808 A 20080204