

Title (en)

Polyfunctional additive for fuel oils

Title (de)

Mehrfunktionelles Additiv für Brennstofföle

Title (fr)

Additif polyfonctionnel pour huiles combustibles

Publication

EP 1116780 B1 20050831 (DE)

Application

EP 00128082 A 20001221

Priority

- DE 10000650 A 20000111
- DE 10048682 A 20000930

Abstract (en)

[origin: EP1116780A1] Additive for improving the cold flow and lubricating properties of diesel fuel comprises an oil-soluble amphiphile and an ethylene/vinyl carboxylate/vinyl neocarboxylate terpolymer. Additive for improving the cold flow and lubricating properties of diesel fuel comprises: (a) 5-95 wt.% of at least one oil-soluble amphiphile of formula (I) and (II): (b) 5-95 wt.% of a terpolymer having a melt viscosity of 20-10,000 mPas at 140 degrees C and comprising vinyl 2-4C carboxylate units (10-35 mole%), vinyl 8-15C neocarboxylate units (1-15 mole%) and ethylene units (to 100 mole%). $R_{<1>}<CO-X-R_{<2>}y$ (I) $R_{<1>}>X-R_{<2>}$ (II) $R_{<1>} = 1-50C$ alkyl, alkenyl, hydroxyalkyl or aryl; $X = NH, NR_{<3>}, O$ or S ; $y = 1-4$; $R_{<2>} = H$ or OH -substituted 2-10C alkyl; $R_{<3>} = 1-20C$ alkyl or N -containing and OH -substituted 2-10C alkyl. Independent claims are also included for the following: (1) diesel fuel containing the additive; (2) a mixture of the additive and a paraffin dispersant of formula (III) or a comb polymer of formula (IV) in a ratio of 1:10 to 20:1 $R_{<51>} = 4-50C$ alkyl or alkenyl; $R_{<52>} =$ ethylene and propylene; $n = 5-100$; $p = 0-50$; $A = R', COOR', OCOR', RCOOR'$ or OR' ; $D = H, Me, A$ or R ; $E = H$ or A ; $G = H, R, RCOOR',$ aryl or heterocyclyl; $M = H, COOR, OCOR, OR$ or $COOH$; $N = H, R, COOR, OCOR, COOH$ or aryl; $R' = 8-150C$ hydrocarbyl; $R = 1-10C$ hydrocarbyl; $m = 0.4-1.0$; $n = 0-0.6$.

IPC 1-7

C10L 1/14; C10L 10/04

IPC 8 full level

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CPC (source: EP US)

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Cited by

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