

Title (en)

Process and product to improve cold flow properties of fuel oils

Title (de)

Verfahren und Produkt zur Verbesserung der Kaltfließseigenschaften von Brennstoffölen

Title (fr)

Procédé et une composition d'amélioration des propriétés d'écoulement à froid d'huiles combustibles

Publication

EP 0931825 B1 20030827 (DE)

Application

EP 98124680 A 19981224

Priority

DE 19802689 A 19980124

Abstract (en)

[origin: EP0931825A2] An additive comprising a mixture of (A) 15-50 wt.% of a copolymer containing, apart from 87-92 mol.% structural units derived from ethylene, (a) 6.5-12 mol.% units derived from vinyl acetate and (b) 0.5-6 mol.% units derived from 4-methyl pentene-1, with the proviso that the sum of (a) and (b) is 8-14 mol.%, and (B) 85-50 wt.% of a further copolymer or terpolymer of ethylene and vinyl esters or acrylic acid esters. Process for improving the cold flow properties of oils containing less than 500 ppm sulfur and at least 8 wt.% n-paraffins of chain length of 18C or longer comprises adding an additive comprising a mixture of (A) 15-50 wt.% of a copolymer containing, apart from 87-92 mol.% structural units derived from ethylene, (a) 6.5-12 mol.% units derived from vinyl acetate and (b) 0.5-6 mol.% units derived from 4-methyl pentene-1, with the proviso that the sum of (a) and (b) is 8-14 mol.%, and (B) 85-50 wt.% of a further copolymer or terpolymer of ethylene and vinyl esters or acrylic acid esters.

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IPC 8 full level

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CPC (source: EP US)

C10L 1/143 (2013.01 - EP US); **C10L 1/195** (2013.01 - EP US); **C10L 1/1973** (2013.01 - EP US)

Cited by

CN102884095A; WO2011138400A1; WO2008140852A1; US8961622B2; US8979951B2; US8968428B2; US9120885B2; US9932430B2; EP2449063B1; EP2449063B2

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EP 0931825 A2 19990728; **EP 0931825 A3 19990915**; **EP 0931825 B1 20030827**; CA 2260168 A1 19990724; CA 2260168 C 20080916; DE 19802689 A1 19990729; DE 59809414 D1 20031002; ES 2206818 T3 20040516; JP H11286690 A 19991019; NO 990291 D0 19990122; NO 990291 L 19990726; US 6090169 A 20000718

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EP 98124680 A 19981224; CA 2260168 A 19990122; DE 19802689 A 19980124; DE 59809414 T 19981224; ES 98124680 T 19981224; JP 1479599 A 19990122; NO 990291 A 19990122; US 23572499 A 19990122