

Title (en)

Fuel oils with improved lubricating activity, containing reaction products of fatty acids with short-chained oil-soluble amines

Title (de)

Brennstofföle mit verbesserter Schmierwirkung, enthaltend Umsetzungsprodukte aus Fettsäuren mit kurzkettigen öllöslichen Aminen

Title (fr)

Huiles combustibles à pouvoir lubrifiant amélioré, contenant des produits de réaction d'acides gras avec des amines solubles dans l'huile à chaînes courtes

Publication

EP 1209217 A3 20030709 (DE)

Application

EP 01126253 A 20011106

Priority

DE 10058356 A 20001124

Abstract (en)

[origin: EP1209217A2] Additives (I) for improving the lubricity of middle distillates with a sulfur content of up to 0.05 wt.% comprise reaction products of 6-50C mono- or di-carboxylic acids and primary, secondary or tertiary amines having a branched alkyl group. Additives (I) for improving the lubricity of middle distillates with a sulfur content of up to 0.05 wt.% comprise reaction products of 6-50C mono- or di-carboxylic acids and primary, secondary or tertiary amines of formula (II): $\text{NR}<1>\text{R}<2>\text{R}<3>$ (II) $\text{R}<1>$ = branched 3-18C alkyl; $\text{R}<2>$, $\text{R}<3>$ = H, 1-12C alkyl or $\text{R}<1>$. An Independent claim is also included for fuel oils comprising a middle distillate with a sulfur content of up to 0.05 wt.% and (I).

IPC 1-7

C10L 1/22; **C10L 10/04**

IPC 8 full level

C10L 1/22 (2006.01); **C10L 1/222** (2006.01); **C10L 1/224** (2006.01); **C10L 10/04** (2006.01); **C10L 10/08** (2006.01); **C10L 10/14** (2006.01)

CPC (source: EP US)

C10L 1/221 (2013.01 - EP US); **C10L 1/2222** (2013.01 - EP US); **C10L 10/08** (2013.01 - EP US)

Citation (search report)

- [X] WO 9804656 A1 19980205 - ELF ANTAR FRANCE [FR], et al
- [X] WO 9933938 A1 19990708 - ELF ANTAR FRANCE [FR], et al
- [X] DE 1645886 A1 19710616 - VEBA CHEMIE AG, et al
- [A] DE 2852541 A1 19790607 - BEVEROLFABRIEKEN
- [A] EP 0798364 A1 19971001 - ORONITE JAPAN LIMITED [JP]

Cited by

CN102453561A; CN102453558A; EP1739154A3; CN103060029A; CN102229837A; CN102277212A; CN103060030A; CN103060028A; EP1739154A2; US8287608B2; WO2023274335A1

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