

Title (en)

Method and use of engine lubricants in four-stroke engines

Title (de)

Methode und Verwendung eines MOTORSCHMIERMITTEL für Viertaktmotoren

Title (fr)

Méthode et usage d'un LUBRIFIANT POUR MOTEURS à quatre temps

Publication

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Application

EP 08709482 A 20080221

Priority

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- GB 0703831 A 20070228
- US 90384407 P 20070228

Abstract (en)

[origin: WO2008104745A2] An engine lubricant, especially an SAE OW engine lubricant is described. The engine lubricant has at least 15 wt% of at least one diester and not more than 15 wt% of additives, wherein said at least one diester, or mixture of said diesters if more than one is present, has a kinematic viscosity at 100 °C of not more than 3.3, a viscosity index of at least 130, a pour point of not more than -30 °C and a Noack evaporation loss of not more than 15 wt%. The diester is preferably selected from the group consisting of: a) reaction products of at least one C₅ to C₁₂, preferably C₆ to C₁₀, aliphatic dicarboxylic acid or anhydride thereof with at least one primary or secondary C₇ to C₁₂, preferably C₈ to C₁₀ aliphatic alcohol, wherein, if said at least one acid is branched, then at least one of said at least one alcohol is linear and, if said at least one acid is linear, then at least one of said at least one alcohol is branched; and b) reaction products of at least one C₅ to C₁₂, preferably C₆ to C₁₀, aliphatic monocarboxylic acid with at least one polyalkylene glycol wherein the alkyl group is selected from a C₂ to C₄ alkyl group and mixtures thereof, and wherein, if said at least one poly(alkylene glycol) contains at least one repeat unit that is branched methyl group, then at least one of said at least one acid is linear and, if said at least one poly(alkylene glycol) contains only linear repeat units, then at least one of said at least one acid is branched.

IPC 8 full level

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CPC (source: EP US)

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Citation (examination)

- GB 1013222 A 19651215 - GEIGY AG J R
- EP 0453114 A1 19911023 - TONEN CORP [JP], et al
- DE 102004034202 A1 20051110 - SASOL GERMANY GMBH [DE]

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