

ABSTRACT

The lubricating oil composition of the invention comprises a lubricating oil base (A) and a copolymer (B) of ethylene and an α -olefin of 3 to 20 carbon atoms. The
5 copolymer (B) of ethylene and an α -olefin of 3 to 20 carbon atoms is contained in the composition in an amount of 1 to 20 % by weight and has the following properties:

(1) the ethylene content (E) is in the range of 40 to 77 % by weight,

10 (2) the weight-average molecular weight (Mw) in terms of polystyrene, as measured by GPC, is in the range of 80,000 to 400,000,

(3) Mw/Mn is not more than 2.4,

(4) the melting point (Tm), as measured by DSC, is
15 not higher than 60°C,

(5) the ethylene content (E, % by weight) and the melting point (Tm, °C), as measured by DSC, satisfy the following relation (I):

$$3.31 \times E - 186 \geq T_m \quad (I),$$

20 and

(6) the proportion (V, %) of $\alpha\beta$ carbon atoms to all carbon atoms in the main chain, and if present, the long-chain branches, and the ethylene content (E, % by weight) satisfy the following relation:

25 $V \leq 10 - 0.1 \times E \quad (II).$

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