

Title (en)

GREASE COMPOSITION AND MACHINE COMPONENT

Title (de)

SCHMIERFETTZUSAMMENSETZUNG UND MASCHINENKOMPONENTE

Title (fr)

COMPOSITION DE GRAISSE ET PIÈCE MÉCANIQUE

Publication

**EP 2465916 A1 20120620 (EN)**

Application

**EP 10808211 A 20100810**

Priority

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Abstract (en)

The invention provides a grease composition containing a base oil, a thickener and an additive, characterized in that the base oil has a kinetic viscosity at 40 °C of 50 to 200 mm<sup>2</sup>/s; the thickener contains a diurea compound represented by formula (I): R<sub>1</sub>-NHCONH-R<sub>2</sub>-NHCONH-R<sub>3</sub> (wherein R<sub>2</sub> is a divalent aromatic hydrocarbon group having 6 to 15 carbon atoms, and R<sub>1</sub> and R<sub>3</sub>, which may be the same or different, represent cyclohexyl group or a straight-chain or branched alkyl group having 8 to 22 carbon atoms); and the additive is at least one selected from the group consisting of a metal salt of naphthenic acid, a salt of a fatty acid having 6 to 10 carbon atoms and an aliphatic amine having 6 to 10 carbon atoms, and a metal salt of an organic sulfonic acid. The composition of the invention shows excellent anti-fretting properties under the conditions of ordinary temperature to low temperature (e.g., -50 °C, preferably about -40 °C).

IPC 8 full level

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Cited by

CN106281237A; EP2933321A4; EP3118287A4; US9909080B2

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