

Title (en)

Friction modified oleaginous concentrates of improved stability.

Title (de)

Reibungsmodifizierte ölige Konzentrate mit verbesserter Stabilität.

Title (fr)

Concentrants huileux de stabilité modifiée et ayant des caractéristiques de friction modifiée.

Publication

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Application

**EP 89301933 A 19890227**

Priority

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Abstract (en)

According to the present invention, oleaginous compositions having improved storage stability properties are provided, which comprise a combination of ashless dispersants, friction modifier and oil-soluble copper antioxidants, wherein the composition is substantially free of boron.

IPC 1-7

**C10M 141/00; C10M 163/00; C10N 10/02**

IPC 8 full level

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**C10M 2219/088** (2013.01); **C10M 2219/089** (2013.01); **C10M 2219/10** (2013.01); **C10M 2219/102** (2013.01); **C10M 2219/104** (2013.01);  
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Cited by

US5486300A; EP0709447A1; US5490945A; AU2007206982B2; GB2444135B; EP3153568A1; US11168280B2; WO2007082825A1;  
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