

Title (en)  
Lubricant formulations containing extreme pressure agents with improved solubility

Title (de)  
Schmiermittelformulationen mit Hochdruckzusätzen mit verbesserter Löslichkeit

Title (fr)  
Formules des lubrifiants comprenant des additifs extrême-pression de solubilité améliorée

Publication  
**EP 1770155 A1 20070404 (EN)**

Application  
**EP 06121232 A 20060925**

Priority  
US 24226905 A 20051003

Abstract (en)  
A method for improving the solubility of a sulfurized extreme pressure agent in a lubricant composition and improved lubricant compositions and uses therefor. The method includes pre-blending organic acid and amine components of a lubricant additive package for the lubricant composition to provide a premixture of organic acid and amine components. The premixture is combined with a sulfurized extreme pressure agent having a viscosity of less than about 5.5 centistokes at 100° C to provide a lubricant additive package. By use of the foregoing process, a turbidity characteristic of the lubricant composition containing the additive package is lower than a turbidity characteristic of a lubricant composition that is made by combining the organic acid and amine components with the sulfurized extreme pressure agent in the absence of the premixture.

IPC 8 full level  
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CPC (source: EP KR US)  
**C10M 7/00** (2013.01 - KR); **C10M 135/02** (2013.01 - KR); **C10M 141/08** (2013.01 - EP US); **C10M 169/04** (2013.01 - EP US); **C10M 169/044** (2013.01 - EP US); **C10M 2203/1006** (2013.01 - EP US); **C10M 2205/0206** (2013.01 - EP US); **C10M 2207/10** (2013.01 - EP US); **C10M 2209/084** (2013.01 - EP US); **C10M 2215/02** (2013.01 - EP US); **C10M 2215/223** (2013.01 - EP US); **C10M 2219/022** (2013.01 - EP US); **C10M 2219/106** (2013.01 - EP US); **C10M 2223/04** (2013.01 - EP US); **C10N 2020/02** (2013.01 - EP US); **C10N 2030/66** (2020.05 - EP US); **C10N 2040/04** (2013.01 - EP US)

Citation (search report)  
• [DXY] US 4954274 A 19900904 - ZAWESKI EDWARD F [US], et al  
• [Y] EP 1518919 A1 20050330 - AFTON CHEMICAL CORP [US]  
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US2011143619A1; US10059080B2; WO2016137880A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR MK YU

DOCDB simple family (publication)  
**EP 1770155 A1 20070404**; CN 1974738 A 20070606; JP 2007100095 A 20070419; KR 20070037693 A 20070406; US 2007078066 A1 20070405

DOCDB simple family (application)  
**EP 06121232 A 20060925**; CN 200610171859 A 20060930; JP 2006272123 A 20061003; KR 20060097281 A 20061002; US 24226905 A 20051003