

Title (en)
STABLE DISPERSIONS OF OIL-INSOLUBLE COMPOUNDS IN HYDROCARBONS FOR USE IN LUBRICANTS

Title (de)
STABILE DISPERSIONEN VON POLAREN VERBINDUNGEN IN KOHLENWASSERSTOFFEN ZUR VERWENDUNG IN SCHMIERMITTELN

Title (fr)
DISPERSIONS STABLES DE COMPOSES INSOLUBLES DANS L'HUILE DANS DES HYDROCARBURES EN VUE D'UNE UTILISATION DANS DES LUBRIFIANTS

Publication
EP 1412478 A2 20040428 (EN)

Application
EP 02807267 A 20020627

Priority
• US 0220404 W 20020627
• US 30207401 P 20010629
• US 30218001 P 20010629
• US 34273401 P 20011220

Abstract (en)
[origin: WO03089550A2] An additive package including an oil-insoluble additive, a method for forming an additive package with an oil-insoluble additive and a lubricant in the form of a dispersion of an oil-insoluble additive in oil is described where an oil-insoluble solvent, e.g. water, can be used to help create the dispersed phase. These packages, methods and lubricants are beneficial in various applications such as internal combustion engines where the oil benefits from functional additives that are not readily soluble in the oil. In many embodiments the oil-insoluble solvent is partially or fully removed before use.

IPC 1-7
C12N 1/00

IPC 8 full level
C10M 125/10 (2006.01); **C10M 129/10** (2006.01); **C10M 129/54** (2006.01); **C10M 133/12** (2006.01); **C10M 133/18** (2006.01); **C10M 133/56** (2006.01); **C10M 135/04** (2006.01); **C10M 135/20** (2006.01); **C10M 135/30** (2006.01); **C10M 137/10** (2006.01); **C10M 141/02** (2006.01); **C10M 141/06** (2006.01); **C10M 141/08** (2006.01); **C10M 141/12** (2006.01); **C10M 163/00** (2006.01); **C10M 169/04** (2006.01); **C10M 173/00** (2006.01); **C10M 177/00** (2006.01); **C10N 10/02** (2006.01); **C10N 10/04** (2006.01); **C10N 20/02** (2006.01); **C10N 20/06** (2006.01); **C10N 30/06** (2006.01); **C10N 40/04** (2006.01); **C10N 40/08** (2006.01); **C10N 40/25** (2006.01); **C10N 70/00** (2006.01)

CPC (source: EP US)
C10M 141/02 (2013.01 - EP US); **C10M 141/06** (2013.01 - EP US); **C10M 141/08** (2013.01 - EP US); **C10M 141/12** (2013.01 - EP US); **C10M 163/00** (2013.01 - EP US); **C10M 173/00** (2013.01 - EP US); **C10M 177/00** (2013.01 - EP US); **C10M 2201/02** (2013.01 - EP US); **C10M 2201/062** (2013.01 - EP US); **C10M 2201/082** (2013.01 - EP US); **C10M 2201/18** (2013.01 - EP US); **C10M 2203/10** (2013.01 - EP US); **C10M 2203/1006** (2013.01 - EP US); **C10M 2207/028** (2013.01 - EP US); **C10M 2207/10** (2013.01 - EP US); **C10M 2207/121** (2013.01 - EP US); **C10M 2207/127** (2013.01 - EP US); **C10M 2207/146** (2013.01 - EP US); **C10M 2207/28** (2013.01 - EP US); **C10M 2207/34** (2013.01 - EP US); **C10M 2215/02** (2013.01 - EP US); **C10M 2215/04** (2013.01 - EP US); **C10M 2215/042** (2013.01 - EP US); **C10M 2215/102** (2013.01 - EP US); **C10M 2215/14** (2013.01 - EP US); **C10M 2215/28** (2013.01 - EP US); **C10M 2217/043** (2013.01 - EP US); **C10M 2219/02** (2013.01 - EP US); **C10M 2219/089** (2013.01 - EP US); **C10M 2219/106** (2013.01 - EP US); **C10N 2010/02** (2013.01 - EP US); **C10N 2010/04** (2013.01 - EP US); **C10N 2010/06** (2013.01 - EP US); **C10N 2020/06** (2013.01 - EP US); **C10N 2030/00** (2013.01 - EP US); **C10N 2030/04** (2013.01 - EP US); **C10N 2030/06** (2013.01 - EP US); **C10N 2030/12** (2013.01 - EP US); **C10N 2030/52** (2020.05 - EP US); **C10N 2040/20** (2013.01 - EP US); **C10N 2040/25** (2013.01 - EP US); **C10N 2040/252** (2020.05 - EP US); **C10N 2050/01** (2020.05 - EP US); **C10N 2050/013** (2020.05 - EP US); **C10N 2050/015** (2020.05 - EP US); **C10N 2050/02** (2013.01 - EP US); **C10N 2070/00** (2013.01 - EP US)

Citation (search report)
See references of WO 03089550A2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 03089550 A2 20031030; **WO 03089550 A3 20040219**; AU 2002367804 A1 20031103; CA 2451672 A1 20031030; EP 1412478 A2 20040428; JP 2005520039 A 20050707; US 2004235678 A1 20041125

DOCDB simple family (application)
US 0220404 W 20020627; AU 2002367804 A 20020627; CA 2451672 A 20020627; EP 02807267 A 20020627; JP 2003586262 A 20020627; US 48253104 A 20040628