

Title (en)  
ASHLESS LUBRICANT COMPOSITION

Title (de)  
ASCHEFREIE SCHMIERMITTELZUSAMMENSETZUNG

Title (fr)  
COMPOSITION DE LUBRIFIANT SANS CENDRES

Publication  
**EP 2391697 A4 20121017 (EN)**

Application  
**EP 10736396 A 20100128**

Priority  
• US 2010022392 W 20100128  
• US 14906709 P 20090202

Abstract (en)  
[origin: WO2010088377A1] A lubricant composition with improved antioxidant capability is provided by way of an additive composition containing a metal free sulfur-containing compound, an aromatic amine, and a hindered amine. Particularly effective metal-free sulfur-containing compounds include ashless dithiocarbamates, such as methylenebis(dibutylidithiocarbamate), and sulfurized fatty acids.

IPC 8 full level  
**C10M 135/18** (2006.01)

CPC (source: EP US)  
**C10M 141/08** (2013.01 - EP US); **C10M 2205/0285** (2013.01 - EP US); **C10M 2207/126** (2013.01 - EP US); **C10M 2215/064** (2013.01 - EP US); **C10M 2215/221** (2013.01 - EP US); **C10M 2219/02** (2013.01 - EP US); **C10M 2219/066** (2013.01 - EP US); **C10M 2219/106** (2013.01 - EP US); **C10N 2030/10** (2013.01 - EP US); **C10N 2030/40** (2020.05 - EP US)

Citation (search report)  
• [XP] WO 2009029474 A1 20090305 - DU PONT [US], et al  
• [Y] US 5073278 A 19911217 - SCHUMACHER ROLF [CH], et al  
• [Y] US 2008221000 A1 20080911 - CHASE KEVIN J [US], et al  
• See references of WO 2010088377A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2010088377 A1 20100805**; CN 102282244 A 20111214; CN 102282244 B 20141015; EP 2391697 A1 20111207; EP 2391697 A4 20121017; JP 2012516384 A 20120719; JP 5710501 B2 20150430; RU 2011136459 A 20130310; RU 2493243 C2 20130920; US 2010197537 A1 20100805; US 2014213493 A1 20140731

DOCDB simple family (application)  
**US 2010022392 W 20100128**; CN 201080004967 A 20100128; EP 10736396 A 20100128; JP 2011548291 A 20100128; RU 2011136459 A 20100128; US 201414164973 A 20140127; US 69570910 A 20100128