

Title (en)

LUBRICANT COMPOSITIONS COMPRISING BOROXINES TO IMPROVE FLUOROPOLYMER SEAL COMPATIBILITY

Title (de)

SCHMIERMITTELZUSAMMENSETZUNGEN MIT BOROXINEN ZUR VERBESSERUNG DER FLUORPOLYMERDICHTUNGSKOMPATIBILITÄT

Title (fr)

COMPOSITIONS LUBRIFIANTES COMPRENANT DES BOROXINES POUR AMÉLIORER LA COMPATIBILITÉ D'UN JOINT D'ÉTANCHÉITÉ EN FLUOROPOLYMÈRE

Publication

EP 2906670 A4 20160330 (EN)

Application

EP 13845754 A 20131011

Priority

- US 201261713103 P 20121012
- US 201261713088 P 20121012
- US 2013064539 W 20131011

Abstract (en)

[origin: US2014106996A1] A lubricant composition including a boroxine compound is disclosed. A lubricant composition and additive package including a boroxine compound and a sterically hindered amine compound are also disclosed. A method of lubricating a system comprising a fluoropolymer seal with the lubricant composition is also disclosed. The boroxine compound of the lubricant composition acts to improve compatibility of the lubricant composition with a fluoropolymer seal.

IPC 8 full level

C10M 155/04 (2006.01); **C10M 133/04** (2006.01); **C10M 169/04** (2006.01)

CPC (source: EP US)

C10M 141/10 (2013.01 - US); **C10M 141/12** (2013.01 - EP US); **C10M 161/00** (2013.01 - US); **C10M 2203/1006** (2013.01 - EP US);
C10M 2203/1025 (2013.01 - EP US); **C10M 2205/0285** (2013.01 - EP US); **C10M 2215/04** (2013.01 - EP US); **C10M 2215/221** (2013.01 - EP US);
C10M 2215/26 (2013.01 - EP US); **C10M 2223/045** (2013.01 - EP US); **C10M 2227/062** (2013.01 - EP US); **C10N 2030/10** (2013.01 - EP US);
C10N 2030/12 (2013.01 - EP US); **C10N 2030/36** (2020.05 - EP US); **C10N 2030/52** (2020.05 - EP US); **C10N 2040/08** (2013.01 - EP US);
C10N 2040/12 (2013.01 - EP US); **C10N 2040/135** (2020.05 - EP US); **C10N 2040/25** (2013.01 - EP US)

Citation (search report)

- [YA] US 2008051306 A1 20080228 - CHASAN DAVID E [US], et al
- [YA] US 2002147116 A1 20021010 - CARRICK VIRGINIA A [US], et al
- See references of WO 2014059277A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)

US 2014106996 A1 20140417; AU 2013329021 A1 20150507; AU 2013329021 B2 20150604; AU 2013329028 A1 20150507;
AU 2013329028 B2 20150604; BR 112015008109 A2 20180424; BR 112015008110 A2 20170704; CA 2894186 A1 20140417;
CA 2894187 A1 20140417; CN 104812878 A 20150729; CN 104822810 A 20150805; CN 104822810 B 20170308; EP 2906669 A1 20150819;
EP 2906669 A4 20160420; EP 2906670 A1 20150819; EP 2906670 A4 20160330; JP 2015531428 A 20151102; JP 2015531429 A 20151102;
JP 2016135872 A 20160728; JP 5882548 B2 20160309; JP 5883200 B2 20160309; KR 101576782 B1 20151210; KR 101576783 B1 20151210;
KR 20150059802 A 20150602; KR 20150060996 A 20150603; MX 2015004548 A 20150717; MX 2015004550 A 20150717;
RU 2015117542 A 20161210; RU 2015117543 A 20161210; US 2014106997 A1 20140417; US 2015045261 A1 20150212;
US 2015045262 A1 20150212; US 2015344806 A1 20151203; WO 2014059270 A1 20140417; WO 2014059277 A1 20140417;
ZA 201503230 B 20171129; ZA 201503231 B 20171129

DOCDB simple family (application)

US 201314051644 A 20131011; AU 2013329021 A 20131011; AU 2013329028 A 20131011; BR 112015008109 A 20131011;
BR 112015008110 A 20131011; CA 2894186 A 20131011; CA 2894187 A 20131011; CN 201380061253 A 20131011;
CN 201380061256 A 20131011; EP 13845613 A 20131011; EP 13845754 A 20131011; JP 2015536932 A 20131011;
JP 2015536936 A 20131011; JP 2016019812 A 20160204; KR 20157012371 A 20131011; KR 20157012372 A 20131011;
MX 2015004548 A 20131011; MX 2015004550 A 20131011; RU 2015117542 A 20131011; RU 2015117543 A 20131011;
US 2013064531 W 20131011; US 2013064539 W 20131011; US 201314051689 A 20131011; US 201314051742 A 20131011;
US 201314051931 A 20131011; US 201314051953 A 20131011; ZA 201503230 A 20150511; ZA 201503231 A 20150511