

Title (en)  
TOXICOLOGICALLY ACCEPTABLE ALKYLPHENOL DETERGENTS AS FRICTION MODIFIERS IN AUTOMOTIVE LUBRICATING OILS

Title (de)  
TOXIKOLOGISCH VERTRÄGLICHE ALKYLPHENOLREINIGUNGSMITTEL ALS REIBUNGSMODIFIKATOREN IN AUTOMOTIVEN SCHMIERÖLEN

Title (fr)  
DÉTERGENTS ALKYLPHÉNOLS TOXICOLOGIQUEMENT ACCEPTABLES UTILISÉS EN TANT QUE MODIFICATEURS DE FROTTEMENT DANS DES HUILES LUBRIFIANTES AUTOMOBILES

Publication  
**EP 3377599 A1 20180926 (EN)**

Application  
**EP 16804973 A 20161115**

Priority  
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• US 2016062031 W 20161115

Abstract (en)  
[origin: WO2017087384A1] The disclosed technology relates to the use of toxicologically acceptable hydrocarbyl- (e.g. alkyl-) phenol detergents and their salts in automotive lubricating oils, such as, for example, automatic or manual transmissions.

IPC 8 full level  
**C10M 159/22** (2006.01); **C10M 129/10** (2006.01); **C10M 129/54** (2006.01)

CPC (source: EP US)  
**C10M 129/10** (2013.01 - EP US); **C10M 129/54** (2013.01 - EP US); **C10M 135/04** (2013.01 - US); **C10M 135/30** (2013.01 - US); **C10M 135/36** (2013.01 - US); **C10M 137/02** (2013.01 - US); **C10M 137/10** (2013.01 - US); **C10M 141/10** (2013.01 - US); **C10M 159/22** (2013.01 - EP US); **C10M 163/00** (2013.01 - EP US); **C10M 169/04** (2013.01 - US); **C10M 2203/003** (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 2207/023** (2013.01 - US); **C10M 2207/027** (2013.01 - EP US); **C10M 2207/028** (2013.01 - EP US); **C10M 2207/144** (2013.01 - EP US); **C10M 2207/262** (2013.01 - EP US); **C10M 2219/00** (2013.01 - EP US); **C10M 2219/022** (2013.01 - EP US); **C10M 2219/08** (2013.01 - US); **C10M 2219/088** (2013.01 - EP US); **C10M 2219/089** (2013.01 - EP US); **C10M 2219/106** (2013.01 - EP US); **C10M 2223/00** (2013.01 - EP US); **C10M 2223/043** (2013.01 - EP US); **C10M 2223/045** (2013.01 - EP US); **C10M 2223/049** (2013.01 - EP US); **C10N 2010/04** (2013.01 - EP US); **C10N 2020/071** (2020.05 - EP US); **C10N 2030/04** (2013.01 - US); **C10N 2030/06** (2013.01 - US); **C10N 2030/40** (2020.05 - EP US); **C10N 2030/52** (2020.05 - EP US); **C10N 2040/042** (2020.05 - EP US); **C10N 2040/044** (2020.05 - EP US); **C10N 2040/25** (2013.01 - US)

C-Set (source: EP US)  
**C10M 2203/1025 + C10N 2020/02**

Citation (examination)  
• WO 2012112635 A1 20120823 - LUBRIZOL CORP [US], et al  
• EP 0367386 A2 19900509 - EXXON CHEMICAL PATENTS INC [US]  
• See also references of WO 2017087384A1

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BA ME

DOCDB simple family (publication)  
**WO 2017087384 A1 20170526**; CA 3005091 A1 20170526; CN 108463543 A 20180828; EP 3377599 A1 20180926; US 2018355273 A1 20181213

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**US 2016062031 W 20161115**; CA 3005091 A 20161115; CN 201680078578 A 20161115; EP 16804973 A 20161115; US 201615775108 A 20161115