

Title (en)  
Marine engine lubrication

Title (de)  
Schmierung für einen Schiffsmotor

Title (fr)  
Lubrification de moteur marin

Publication  
**EP 2824165 A1 20150114 (EN)**

Application  
**EP 14171965 A 20140611**

Priority  
• EP 13175702 A 20130709  
• EP 14171965 A 20140611

Abstract (en)  
A detergent system that includes (i) an overbased C20-28 alkyl-substituted hydroxybenzoate Ca salt of TBN less than 250 and (ii) an overbased C14-18 alkylsubstituted hydroxybenzoate Ca salt of TBN less than 250, the wt % Ca ratio of (ii) to (i) being more than one, is used in a trunk piston marine lubricant to improve its asphaltene dispersancy when lubricating a medium-speed compression-ignited marine engine fuelled by a heavy fuel oil.

IPC 8 full level  
**C10M 129/54** (2006.01); **C10M 159/20** (2006.01); **C10M 169/04** (2006.01); **C10N 10/04** (2006.01); **C10N 30/04** (2006.01); **C10N 40/25** (2006.01)

CPC (source: BR EP US)  
**C10M 129/54** (2013.01 - BR US); **C10M 159/20** (2013.01 - EP US); **C10M 159/22** (2013.01 - BR); **C10M 169/04** (2013.01 - EP US); **C10M 169/045** (2013.01 - BR); **C10M 2203/1006** (2013.01 - BR EP US); **C10M 2203/1025** (2013.01 - BR); **C10M 2207/144** (2013.01 - BR); **C10M 2207/262** (2013.01 - BR EP US); **C10N 2010/04** (2013.01 - BR EP US); **C10N 2030/04** (2013.01 - BR EP US); **C10N 2040/252** (2020.05 - BR EP US); **C10N 2040/38** (2020.05 - EP US)

Citation (applicant)  
• EP 1992678 B1 20101124 - CHEVRON JAPAN LTD [JP]  
• US 2007027057 A1 20070201 - LE COENT JEAN-LOUIS [FR], et al  
• "Engine Oil Licensing and Certification System", December 1996, AMERICAN PETROLEUM INSTITUTE (API) PUBLICATION  
• IH INTERNATIONAL SYMPOSIUM ON MARINE ENGINEERING, TOKYO, 24 October 2005 (2005-10-24)  
• "The Benefits of Salicylate Detergents in TPEO Applications with a Variety of Base Stocks", CONFERENCE PROCEEDINGS, 21 May 2007 (2007-05-21)  
• "Meeting the Challenge of New Base Fluids for the Lubrication of Medium Speed Marine Engines - An Additive Approach", CONGRESS PROCEEDINGS

Citation (search report)  
• [Y] EP 2604676 A1 20130619 - CHEVRON ORONITE TECHNOLOGY BV [NL], et al  
• [Y] EP 2428550 A1 20120314 - CHEVRON JAPAN LTD [JP]  
• [Y] US 2007117726 A1 20070524 - CARTWRIGHT STANLEY J [CA]  
• [Y] EP 2123739 A1 20091125 - INFINEUM INT LTD [GB]  
• [XY] US 2008167207 A1 20080710 - NAGAMATSU HIROYUKI [JP]

Designated contracting state (EPC)  
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Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
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