

Title (en)

Alkaline earth metal hydrocarbyl phenates, their sulphurised derivatives, their production and use thereof

Title (de)

Erdalkalimetallalkylphenolate, ihre geschwefelten Derivate, ihre Herstellung und ihre Verwendung

Title (fr)

Alkylphénates de métaux alcalino-terreux, leurs dérivés sulfurés, leur préparation et leur utilisation

Publication

EP 0271262 B2 20020529 (EN)

Application

EP 87310460 A 19871126

Priority

GB 8628609 A 19861129

Abstract (en)

[origin: EP0273588A1] An additive concentrate suitable for incorporation into a finished lubricating oil composition, the additive concentrate comprising: (a) a lubricating oil, (b) a lubricating oil soluble sulphurised alkaline earth metal hydrocarbyl phenate modified by incorporation of from greater than 2 to 35% by weight based on the weight of the composition of either (i) at least one carboxylic acid having the formula: - R - @ - COOH (I) wherein R is a C10 to C24 alkyl or alkenyl group and R<1> is either hydrogen, as C1 to C4 alkyl group or a -CH₂-COOH group, or an anhydride, acid chloride or ester thereof or (ii) a di- or polycarboxylic acid containing from 36 to 100 carbon atoms or an anhydride, acid chloride or ester thereof, the composition having a TBN greater than 300.

IPC 1-7

C10M 159/22

IPC 8 full level

C10L 1/14 (2006.01); **C10L 1/18** (2006.01); **C10L 1/182** (2006.01); **C10L 1/183** (2006.01); **C10L 1/185** (2006.01); **C10L 1/188** (2006.01); **C10L 1/19** (2006.01); **C10L 1/30** (2006.01); **C10M 159/22** (2006.01); **C10N 10/04** (2006.01); **C10N 20/00** (2006.01); **C10N 20/02** (2006.01); **C10N 30/02** (2006.01); **C10N 30/10** (2006.01); **C10N 40/00** (2006.01); **C10N 40/25** (2006.01); **C10N 70/00** (2006.01)

CPC (source: EP KR)

C10M 159/22 (2013.01 - EP KR)

Cited by

EP0643126A3; US5792735A; US6008166A; US5397484A; EP0662509A3; US5674821A; EP0778336A1; US5895777A; EP0640682A1; US5446202A; EP0410648A3; US5281345A; US5529705A; EP0354647A3; US5441652A; EP0685553A3; US5602084A; EP0385616A3; US5162085A; US6417148B1; WO2011066059A1; WO2012109311A2; WO2012087775A1; WO2014172125A1; WO9746647A1; WO2011066142A1; WO2011066144A1; WO2011066145A1; EP1935970A1; WO2011017148A1; WO2011066141A2; EP1710294A1; EP1743933A1; EP0685553A2; EP2607462A1; EP2675876B1

Designated contracting state (EPC)

AT BE CH DE ES FR GB GR IT LI NL SE

DOCDB simple family (publication)

EP 0273588 A1 19880706; EP 0273588 B1 19920812; EP 0273588 B2 20010328; AT E79395 T1 19920815; AT E79396 T1 19920815; AU 608792 B2 19910418; AU 609075 B2 19910426; AU 8237287 A 19880616; AU 8238087 A 19880616; BR 8707550 A 19890314; BR 8707551 A 19890314; CA 1305696 C 19920728; CA 1305697 C 19920728; CN 1012074 B 19910320; CN 1015642 B 19920226; CN 87108239 A 19880615; CN 87108344 A 19880622; DE 3781118 D1 19920917; DE 3781118 T2 19921217; DE 3781118 T3 20020814; DE 3781126 D1 19920917; DE 3781126 T2 19930304; DE 3781126 T3 20010802; DK 175287 B1 20040809; DK 419788 A 19880727; DK 419788 D0 19880727; DK 419888 A 19880727; DK 419888 D0 19880727; EP 0271262 A1 19880615; EP 0271262 B1 19920812; EP 0271262 B2 20020529; ES 2051751 T3 19940701; ES 2051752 T3 19940701; FI 883502 A0 19880725; FI 883502 A 19880725; FI 883503 A0 19880725; FI 883503 A 19880725; FI 93653 B 19950131; FI 93653 C 19950510; FI 93654 B 19950131; FI 93654 C 19950510; GB 8628609 D0 19870107; GR 3006075 T3 19930621; GR 3006112 T3 19930621; IN 169547 B 19911109; IN 172581 B 19931016; JP H01501399 A 19890518; JP H01501400 A 19890518; JP H0631383 B2 19940427; JP H0631384 B2 19940427; KR 890700158 A 19890310; KR 890700159 A 19890310; KR 960010991 B1 19960814; KR 960010992 B1 19960814; MX 169105 B 19930622; MX 169106 B 19930622; NO 176147 B 19941031; NO 176147 C 19950208; NO 302763 B1 19980420; NO 883348 D0 19880728; NO 883348 L 19880914; NO 883349 D0 19880728; NO 883349 L 19880922; SG 101092 G 19921204; SG 101192 G 19921204; WO 8803944 A1 19880602; WO 8803945 A1 19880602; ZA 878938 B 19890726; ZA 878939 B 19890726

DOCDB simple family (application)

EP 87310461 A 19871126; AT 87310460 T 19871126; AT 87310461 T 19871126; AU 8237287 A 19871126; AU 8238087 A 19871126; BR 8707550 A 19871126; BR 8707551 A 19871126; CA 552952 A 19871127; CA 552953 A 19871127; CN 87108239 A 19871129; CN 87108344 A 19871129; DE 3781118 T 19871126; DE 3781126 T 19871126; DK 419788 A 19880727; DK 419888 A 19880727; EP 87310460 A 19871126; ES 87310460 T 19871126; ES 87310461 T 19871126; FI 883502 A 19880725; FI 883503 A 19880725; GB 8628609 A 19861129; GB 8700847 W 19871126; GB 8700848 W 19871126; GR 920402404 T 19921026; GR 920402433 T 19921029; IN 1018DE1987 A 19871130; IN 1019DE1987 A 19871130; JP 50710287 A 19871126; JP 50710387 A 19871126; KR 880700889 A 19880727; KR 880700896 A 19880728; MX 963687 A 19871130; MX 965487 A 19871130; NO 883348 A 19880728; NO 883349 A 19880728; SG 101092 A 19921005; SG 101192 A 19921005; ZA 878938 A 19871127; ZA 878939 A 19871127