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(54) **Lubricating oil composition containing a mixture of metal salts of aromatic organic acids**

(57) Lubricating oil composition containing an organic acid metal salt having excellent friction coefficient reducing effects.

A lubricating oil composition comprising a lubricating base stock and an effective amount of a mixture of metal salts of chain-hydrocarbon-group-substituted ar-

omatic organic acids. Each of the aromatic groups has been substituted by at least one chain hydrocarbon group. The sum of the number of chain hydrocarbon groups each carrying at C-2 or C-3 thereof the associated aromatic group bonded thereto is in a range of from 30% to 90% of the total number of the chain hydrocarbon groups.

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PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention EP 98 30 4250 shall be considered, for the purposes of subsequent proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP 0 765 930 A (EXXON CHEMICAL PATENTS INC) 2 April 1997 * page 2, line 1-9 * * page 3, line 15-45 * * page 4, line 41-47 * * examples 5-11 * * claims 1-10 * ---	1-10	C10M129/10 C10M129/54 C10M135/10 C10M135/30 C10M137/12 C10M159/20 C10M159/22 C10M159/24 C07C309/31 //C10N30:06
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X	GB 1 476 891 A (EXXON RESEARCH ENGINEERING CO) 16 June 1977 * page 1, line 29-77 * * page 2, line 45 - page 3, line 39 * * examples 1-4 * --- -/-	1-10	TECHNICAL FIELDS SEARCHED (Int.Cl.6) C10M C07C
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims. Claims searched completely : Claims searched incompletely : Claims not searched : Reason for the limitation of the search: see sheet C			
Place of search		Date of completion of the search	Examiner
MUNICH		9 July 1999	Perakis, N
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPC FORM 1503 03 82 (P04C07)



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INCOMPLETE SEARCH
SHEET C

Application Number

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Claim(s) searched incompletely:
1-10

Reason for the limitation of the search:

The subject-matter of claim 1 contains (i) a definition of the salt which is very broad (cf. description page 5, line 12 to page 7, line 19) and (ii) an unusual parameter as distinguishing feature over the prior art (the sum of the number of chain hydrocarbon.....at least 30% of the total number of said chain hydrocarbon groups). The very broad definition of the salt in contrast to the technical evidence of the application which refers exclusively to calcium alkylbenzene sulfonates do not fulfil the requirements of Article 83 and 84 EPC since there is no sufficiency of disclosure and support in the application as originally filed. The unusual parameter renders meaningless the comparison of the claimed subject-matter with the state of the art which does not cite this parameter. Moreover there is no sufficiency of disclosure under Article 83 EPC for said parameter. Therefore no meaningful search can be carried out in the state of the art under Rule 45 EPC. The search has therefore been limited to metal salts of hydrocarbon substituted benzene sulfonates ignoring the limitation introduced by the unusual parameter.

Application Number

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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