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Declaration under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:
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(88) Date of publication of the international search report:
15 March 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DISPERSANTS

(57) Abstract: The present invention relates to dispersants for dispersing a particulate solid for millbases, paints and inks. The present invention provides a composition containing a particulate solid, a polar organic medium and a compound or salts thereof for formula T-$(A)_m(B)_n$-X-Z-$Q_{(0-p)}$ wherein T is hydrogen or a polymerisation terminating group; A is the residue of a hydroxy carboxylic acid or lactone thereof; B is the residue of an amino carboxylic acid; X is a direct bond or a divalent group; Z is an acidic or basic group or a moiety which contains an acidic or basic group; Q is an optional residue of an oxide, urea or a dibasic acid or anhydride thereof; m and n are positive integers; and p represents the number of residual amino and/or imino groups in Z.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. B01F17/00 C09B67/00 C09D11/00 C09D7/02 C08G69/44
C08G81/00 C08G69/48

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B01F C09B C09D C08G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 768 321 A (AJINOMOTO CO., LTD) 16 April 1997 (1997-04-16) page 3, line 47 - page 4, line 34; claims 1-11; examples 4,8 page 5, line 25 - line 28 page 6, line 28 - line 51 page 9 -----	1-8, 10-13, 16,19-23
X	EP 0 189 385 A (BERGVIK KEMI AB; CANESTRI, GIUSEPPE, DR) 30 July 1986 (1986-07-30) page 4, paragraph 4; claims 1,4,6,9,10; examples 11,12,15 page 6, paragraph VII page 12 -----	1-3,5,7, 9,19,20
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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
7 September 2006	13. 11. 2006

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	DE LA MORINERIE, B

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 81/02395 A (SADOLIN & HOLMBLAD AS; GULEV N; CANESTRI G) 3 September 1981 (1981-09-03) page 3, paragraphs 2,4; claims 1-6 page 5	1-3,5,7, 19-22
X	EP 0 322 154 A (PFIZER INC) 28 June 1989 (1989-06-28) claims 3,6; example 5	23
A	WO 99/55763 A (AVECIA LIMITED; THETFORD, DEAN; FAWKES, DAVID, MELVILLE) 4 November 1999 (1999-11-04) cited in the application claims 1-18	1-9, 11-13, 16,19-23
A	WO 01/21298 A (AVECIA LIMITED; THETFORD, DEAN; MAXWELL, IAN, DONALD; SLATER, LINDSAY,) 29 March 2001 (2001-03-29) cited in the application claims 1-19	1-13
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 26, 1 July 2002 (2002-07-01) & JP 2001 240780 A (NIPPON STEEL CHEM CO LTD), 4 September 2001 (2001-09-04) abstract	1-9, 11-13, 16,19-23

INTERNATIONAL SEARCH REPORT

International application No.
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1 in part, 2 in part, 3-13, 16, 19-23

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1 in part, 2 in part, 3-13, 16, 19-23

   Dispersant obtained from amine reacted with poly(esteramide) having a free carboxylic group; and compositions.

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2. claims: 1 in part, 2 in part, 3-12, 14, 17, 19-22, 25

   Dispersant obtained from amine reacted with poly(esteramide) having a vinyl group; and compositions.

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3. claims: 1 in part, 2 in part, 3-10, 15, 18, 19-22, 24

   dispersant obtained from moiety containing acidic group linked to poly(esteramide); and compositions.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2006/013604

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