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**Declarations under Rule 4.17**:

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

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

**Published**:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
13 January 2011

(54) Title: OLEOPHILIC COMPOSITIONS, COATINGS EMPLOYING THE SAME, AND DEVICES FORMED THEREFROM

(57) Abstract: Oleophilic compositions, coatings employing the same, and devices formed therefrom that exhibit one or more improved coating properties. The compositions may comprise a film-forming binder and, when at least partially coated and cured on a substrate, comprise: (a) a contact angle with water ranging from 50 to less than 78; and (b) a contact angle with squalene of less than 25. The coating compositions may include various binder compositions, including, for example, thermosetting acrylic polymers, thermoplastic acrylic polymers, radiation curable coating compositions, and alkoxide compositions. The resultant coatings exhibit one or more improved physical properties, such as improved gloss, improved stain and sebum resistance, and/or improved cleaning ability relative to existing coating systems when deposited over various substrates.

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# INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/036274

**A. CLASSIFICATION OF SUBJECT MATTER**
INV. C09D133/08 C09D133/10

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)
C09D

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

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | JP 2004 359834 A (MITSUBISHI CHEM CORP) 24 December 2004 (2004-12-24) abstract | 1-34 |
| X | US 2007/110902 A1 (JOHNSON JEFFERY W [US] ET AL) 17 May 2007 (2007-05-17) example 1 | 1-34 |

☐ Further documents are listed in the continuation of Box C.

☒ 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 |
|---|---|
| 8 July 2010 | 30/11/2010 |
| Name and mailing address of the ISA/<br>European Patent Office, P.B. 5818 Patentlaan 2<br>NL – 2280 HV Rijswijk<br>Tel. (+31–70) 340–2040,<br>Fax: (+31–70) 340–3016 | Authorized officer<br>Simmerl, Reinhold |

# INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/036274

**Box No. 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 No. 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 fees, this Authority did not invite payment of additional fees.

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.:

1-34

**Remark on Protest**

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ 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: 1-34

Coating compositions, coated substrates and devices comprising an at least partially cured film forming binder characterized by certain contact angles in water and squalene.

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2. claims: 35-40

Coating composition comprising a monomeric compound having at least one (meth)acrylate with polycycloalkyl groups or alkyl groups having 10 or more carbon atoms.

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3. claim: 41

A device comprising a coating composition which is an at least partially cured alkoxyd with a contact angle in squalene of 20 or less.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2009/036274

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| JP 2004359834 A | 24-12-2004 | JP 4517590 B2 | 04-08-2010 |
| US 2007110902 A1 | 17-05-2007 | US 2010174026 A1 | 08-07-2010 |