

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 June 2007 (21.06.2007)

PCT

(10) International Publication Number
WO 2007/070601 A3

(51) International Patent Classification:

B05D 5/08 (2006.01) **C09D 5/00** (2006.01)
A47J 27/00 (2006.01) **C09D 5/16** (2006.01)
A47J 36/02 (2006.01) **C09D 7/12** (2006.01)
C08K 3/04 (2006.01) **C09D 127/12** (2006.01)

(21) International Application Number:

PCT/US2006/047622

(22) International Filing Date:

13 December 2006 (13.12.2006)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/750,210 14 December 2005 (14.12.2005) US

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(81) Designated States (unless otherwise indicated, for every

kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every

kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

31 January 2008

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: NON-STICK COATING COMPOSITION COMPRISING DIAMOND PARTICLES AND SUBSTRATE HAVING THE COMPOSITION APPLIED THERETO

(57) Abstract: A non-stick coating composition comprising diamond particles of relatively large size, i.e., greater than 1 micrometer, preferably greater than 10 micrometers, and a fluoropolymer, can be applied to a substrate. In addition, a structure comprising a substrate and an undercoat is applied to the substrate, where the undercoat comprises a primer layer comprising a heat resistant non-fluoropolymer polymer binder and diamond particles, and optionally a midcoat also comprising diamond particles.



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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/047622

A. CLASSIFICATION OF SUBJECT MATTER

INV. B05D5/08 A47J27/00 A47J36/02 C08K3/04 C09D5/00
C09D5/16 C09D7/12 C09D127/12

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)
B05D A47J C08K 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	US 2004/115477 A1 (NESBITT BRUCE [US]) 17 June 2004 (2004-06-17) paragraphs [0020], [0023], [0028], [0104]; claims 1,7,10,33 ----- -/--	1-11

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

19 June 2007

Date of mailing of the international search report

30/11/2007

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/047622

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DATABASE WPI Section Ch, Week 199647 Derwent Publications Ltd., London, GB; Class A14, AN 1996-472438 XP002438259 KOBAYASHI T; SAIGOU T; SUZUKI E: "Sliding part resin-based compsns. having high wear resistance - comprises base resin mixt. of e.g. polyimide(s), polyester(s), PTFE filler and inorganic particles e.g. diamond, cubic carbide systems" & JP 08 239682 A (STARLITE KOGYO KK) 17 September 1996 (1996-09-17) abstract -----	1-11
A	US 5 171 404 A (ELLIS ERIC R [US] ET AL) 15 December 1992 (1992-12-15) column 6, lines 18-39; claim 12 -----	1-11

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/047622

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.:

see additional sheet

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: 1-11

A primer comprising a non-fluoropolymer containing polymer binder and a plurality of diamond particles, in an undercoat belonging to a structure comprising a substrate and a non-stick coating applied to said substrate, said non-stick coating comprising an undercoat and an overcoat

2. claims: 12-20

Non-stick composition comprising a liquid composition including fluoropolymer and diamond particles

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/047622

Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
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