

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 February 2003 (13.02.2003)

PCT

(10) International Publication Number
WO 03/011984 A3

(51) International Patent Classification⁷: **C08L 63/00**,
67/00, C08K 3/38

(21) International Application Number: PCT/US02/23195

(22) International Filing Date: 19 July 2002 (19.07.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/919,213 31 July 2001 (31.07.2001) US

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
30 October 2003

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.

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(54) Title: WELDABLE COATING COMPOSITIONS HAVING IMPROVED INTERCOAT ADHESION

(57) Abstract: A weldable curable coating composition with improved intercoat adhesion is disclosed comprising a resinous binder comprising a polymer (A) with functional groups and a crosslinking agent with functional groups reactive with those of polymer (A); an electroconductive pigment; and an adhesion promoting compound comprising boron containing compounds. In an alternative embodiment, the adhesion promoting compound may comprise siloxane polymer reacted with aluminates, titanates, zirconates, silicates, siloxanes, silanes, and mixtures thereof, wherein each component is different.



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INTERNATIONAL SEARCH REPORT

Inter I Application No
PCT/US 02/23195

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08L63/00 C08L67/00 C08K3/38

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)

IPC 7 C08L C08K

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 318 963 A (SUNSTAR GIKEN) 7 June 1989 (1989-06-07) page 4, line 33 - line 34; claim 1 ---	1-72
X	WO 98 31750 A (DOW) 23 July 1998 (1998-07-23) page 8, line 25 - page 9, line 6 page 30, line 3 - line 9 ---	1-72
X	US 3 687 872 A (MARKOVITZ) 29 August 1972 (1972-08-29) claims 1,2 ---	1-72
X	US 5 432 007 A (NAITO) 11 July 1995 (1995-07-11) claim 1 ---	1-72
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Further documents are listed in the continuation of box C.



Patent family members are listed in 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

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"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

17 December 2002

Date of mailing of the international search report

09.04.03

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INTERNATIONAL SEARCH REPORT

Inter Application No
PCT/US 02/23195

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 772 240 A (GREENLEE) 13 November 1973 (1973-11-13) claim 1 ---	1-9,36, 37,69,70
X	US 4 702 860 A (KINDEROV ET AL) 27 October 1987 (1987-10-27) claim 1 -----	1

INTERNATIONAL SEARCH REPORT

tional application No.
PCT/US 02/23195**Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

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.:

1-72

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

1. Claims: 1-72

(multilayer) coating composition and substrate relating to composition comprising (A) resinous binder comprising (1) polymer and (2) curing agent, (B) electroconductive pigment and (C) boron containing compound

2. Claims: 73-75

composition comprising (a) siloxane (b) reactant reactive with group of the siloxane and (c) at least one compound selected from borates, aluminates, titanates, zirconates, siloxanes, silanes and mixtures thereof

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter Application No

PCT/US 02/23195

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