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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))

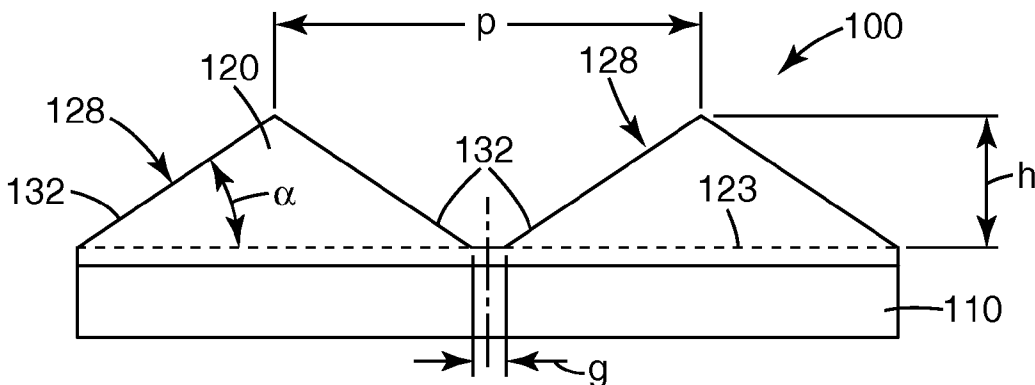
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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

- (88) **Date of publication of the international search report:**
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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:** DRY APPLY ADHESIVE GRAPHIC FILMS



(57) **Abstract:** An adhesive composition includes a blend of a pressure sensitive adhesive and an additive. The pressure sensitive adhesive includes a (meth)acrylate polymer. The additive includes a copolymer with a vinyl polymeric backbone that includes at least one free radically polymerizable vinyl monomer A and at least one reinforcing comonomer B, wherein B is present at 0 to about 20% by weight of the copolymer, and a pendant polysiloxane monomer grafted to the backbone. The adhesive composition may optionally be crosslinked. The adhesive composition may be applied to a film to form a graphic article. These graphic articles may be applied to a substrate without liquid application aids.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/063636**A. CLASSIFICATION OF SUBJECT MATTER***C09J 133/08(2006.01)i, C09J 133/10(2006.01)i, C09J 183/04(2006.01)i*

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 8: C09J, B32B, A61K

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

Korean Utility models and applications for Utility models since 1975
Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS (KIPO internal), USP, USAPP, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 01-256580 A (NIPPON OIL & FATS CO., LTD. et al.) 13 October 1989 See claim 1, pages 666 - 669.	1 - 4, 8, 10, 11, 19 - 21
Y	See whole document.	5 - 7, 12 - 14, 18
Y	US 6,472,065 B1 (ALAHAPPERUMA, K. A. et al.) 29 October 2002 See abstract and claims 1-3.	5 - 7, 12 - 14
X	US 4,693,935 A (MAZUREK, M. H.) 15 September 1987 Cited in the application. See abstract, columns 4 - 8, examples 31, 36, 41, 80 - 84.	1 - 4, 5 - 11, 15 - 17, 19 - 22
Y	See whole document.	5 - 7, 12 - 14, 18, 23 - 44
Y	US 6,630,239 B2 (CERNOHOUS, J. J. et al.) 07 October 2003 See column 7, lines 50-63.	18
Y	US 5,650,215 A (MAZUREK, M. H. et al.) 22 July 1997 See abstract, figures 7-9, columns 1-2, 7-11, 14-15, examples. See whole document.	23 - 44

 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 application or patent 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 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

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INTERNATIONAL SEARCH REPORT

International application No.

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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.
A	US 6,197,397 B1 (SHER, F. T. et al.) 06 March 2001 See whole document.	23 - 44
A	US 6,866,928 B2 (NARUM, T. N. et al.) 15 March 2005 See whole document.	23 - 44
A	JP 2003-183110 A (TOKUYAMA CORP. et al.) 03 July 2003 See whole document.	1 - 26

INTERNATIONAL SEARCH REPORT

International application No.

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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:

I: Independent claim 1 directed to an adhesive composition comprising of a blend of a (meth)acrylate pressure sensitive adhesive and a copolymer additive comprising a vinyl monomer A, a reinforcing monomer B up to 20 % by weight of the copolymer, and a pendant polysiloxane monomer whose weight % in the copolymer is 0.01 to 50 with a number average molecular weight of 500 to 50,000, wherein the blend comprises less than 1 % by weight of the polysiloxane monomer.

II: Independent claim 11 directed to a same composition of claim 1 except that the amount of polysiloxane monomer in the blend is not specified whereas the presence of a crosslinker is essential.

III: Independent claim 19 directed to an article comprising a polymeric film having thereon a layer of an adhesive composition identical to the adhesive composition of claim 1.

(Continued on the Extra 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.:

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2007/063636

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(Continued on the Next Sheet)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2007/063636

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Continuation of Box III:

IV: Independent claim 27 directed to graphic article comprising an imageable film; a layer of adhesive film wherein the layer comprises a blend of a (meth)acrylate pressure sensitive adhesive and an additive comprising a polysiloxane monomer up to 50 % by weight with a number average molecular weight of 500 to 50,000; and a release liner having a microstructured surface.

V: Independent claim 32 directed to a method of applying a graphic article to substrate comprising a step of providing a graphic article; an imageable polymeric film; a layer of an adhesive on the film, wherein the adhesive comprises a blend of a pressure sensitive adhesive comprising a (meth)acrylate polymer and an additive comprising a polysiloxane monomer; and a microstructured release liner; removing at least of the release liner; and adhering a dry surface of the layer of adhesive to a surface of the dry substrate.

VI: Independent claim 38 directed to a sign comprising a transparent or translucent substrate, an adhesive layer, an imageable polymeric film, wherein the adhesive comprises a blend of a (meth)acrylate pressure sensitive adhesive and a additive comprising a polysiloxane monomer, and wherein the adhesive layer has a microstructured surface.

Consequently, the only common technical feature between the independent claims 1, 11, 19, 27, 32, and 38 is an pressure sensitive adhesive comprising a blend of a (meth)acrylate polymer and an additive comprising a polysiloxane monomer. However, this feature lacks novelty and/or inventive step with respect to the inventions in the following documents cited in this ISR:

(a) JP 01-256580 A, (b) US 4,693,935 A, and (c) US 5,650,215 A

Thus, there is no technical relationship left over the prior art among the claimed inventions, leaving the claims without a single general inventive concept. Hence, there is lack of unity "a posteriori" (PCT Rules 13.1 and 13.2).