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(54) **Title:** COLORED INK AND A METHOD FOR FORMULATING A COLORED INK

(57) **Abstract:** A method for preparation of a colored ink that includes: preparing a white formulation that comprises sub-micron inorganic pigment; preparing a colored formulation that comprises sub-micron organic pigment; and mixing and grinding the white ink formulation and the colored ink formulation to provide a colored ink formulation suitable for jet ink applications. A colored ink that includes white sub-micron inorganic pigment and colored sub-micron organic pigment; wherein the colored ink is characterized by a high (color) hiding power and color density, and can meet the requirements of the PCB industry.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL 08/01454

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - C09D 11/00; B32B 15/00 (2009.01) USPC - 523/160;106/31.28;428/209 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) - C09D 11/00; B32B 15/00 (2009.01) USPC - 523/160;106/31.28;428/209 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC(8) - C09D 11/00; B32B 15/00 (2009.01) (text search only - see search history printout) USPC - 523/160;106/31.28;428/209 (text search only - see search history printout) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) (USPT, PGPB, EPAB, JPAB); Google Patent, Google Scholar, Dialog Web Search terms on extra sheet		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2007/0027239 A1 (Weber et al.) 01 Feb 2007. (01.02.2007) (para [0001], [0002], 0008), [0009], [0017], [0018], [0020], [0021], [0022], [0023], [0026], [0027], [0030], [0032], [0033], [0036], [0037], [0041], [0051], [0059], [0060]).	1-49
Y	US 6,966,643 B2 (Hale et al.) 22 Nov 2005 (22.11.2005) (Col. 5, lines 13-16, Col. 10, lines 55 - Col. 11, line 18, Col. 9, lines 64-67).	1-49 4, 28, 47
Y	US 2006/0019077 A1 (Hopper et al.) 26 Jan 2006 (26.01.2006) (para [0008]-[0010]).	16
Y	US 2004/0106700 A1 (Yamanouchi et al.) 03 Jun 2004 (03.06.2004) (para [0201]).	17,27
Y	US 2006/0025497 A1 (Ushirogouchi et al.) 02 Feb 2006 (02.02.2006) (para [0168]).	
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
* 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 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		
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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continued from box B

Search terms:

inkjet, ink jet, ink, cymel, cytec, amino resin, melamine, white, inorganic pigment, organic pigment, titanium oxide, tio2, titanium dioxide, barium sulfate, zinc oxide, barium sulphate, dispersion, pcb, printed circuit boards, printed wire boards, grinding, milling, silica, heat sensitive, novolac, phenolic, dowanol, byk, acidic polymer, aromatic acid, dispersants, solder, mdea, N-methyldiethanolamine

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL 08/01454

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.: 29-42 and 50-75 are improper multiple dependent
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:

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 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.:

- 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.