

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**
(PCT Rule 43*bis*.1)

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2018/039784

International filing date (day/month/year)
27.06.2018

Priority date (day/month/year)
27.06.2017

International Patent Classification (IPC) or both national classification and IPC
INV. C09D11/102 C09D11/107 C09D11/322 C09D11/38

Applicant
CORNING INCORPORATED

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of this opinion

see form PCT/ISA/210

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed.
 - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|-------------|
| Novelty (N) | Yes: Claims | |
| | No: Claims | <u>1-27</u> |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | <u>1-27</u> |
| Industrial applicability (IA) | Yes: Claims | <u>1-27</u> |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1 EP 2 143 769 A1 (SEIKO EPSON CORP [JP]) 13 January 2010 (2010-01-13)
- D2 US 2014/216300 A1 (WU WEI [CN] ET AL) 7 August 2014 (2014-08-07)
- D3 US 2016/272826 A1 (WANG FANG-FANG [TW] ET AL) 22 September 2016 (2016-09-22)
- D4 US 2016/002479 A1 (CHEN TZU-HAN [TW] ET AL) 7 January 2016 (2016-01-07)

1 Article 33(2) PCT

1.1 The present application does not meet the criteria of Article 33(2) PCT, because the subject-matter of claims 1-27 is not new.

1.2 Claim 1 discloses an ink composition comprising:
a white pigment material;
a resin composition comprising:
a silicone resin component; and
at least one of an amino resin component or an acrylic resin component; and
a solvent composition comprising one or more of a propylene-glycol-ether, diethylene-glycol-dimethyl-ether, propylene-glycol-methyl-ether-acetate, or diethylene-glycol-diethyl ether.

Such an ink is anticipated by D1 (e.g. tables 6 and 7) and D2 (e.g. example 14 and par. [0033] for the one list selection of the white pigment).

Therefore the subject matter of claim 1 lacks novelty.

1.3 The attention of the applicant is drawn to the fact that the features of "silicone resin" and "acrylic or amino resin" are interpreted as broad as possible e.g. in the case of D1 the surfactant Byk -UV3500 (based on polydimethyl siloxane) is regarded as silicone resin.

- 1.4 The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claims 17, 22 and 27 and the dependent claims 2-16, 18-21 and 23-26, which therefore are also considered not new.

2 Article 33(3) PCT

- 2.1 Since the subject matter of the claims 1-27 is anticipated by D1-D2 (see above) it is, therefore, not regarded as involving an inventive step (Article 33(3) PCT).

- 2.2 Additionally the teaching of D2 and D3 would also result in a lack of inventive activity.

D2 and D3 do not disclose white pigments but pigments in general or colored pigments. A simple exchange of the pigments of D3 and D4 with a white one would directly lead to the subject matter of the application. Such an exchange is regarded as trivial by a man skilled in the art and therefore an inventive step can not be acknowledged in the view of D3 and D4.

3 Industrial Applicability

- 3.1 The subject matter of claims 1-27 is industrial applicable.