

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

To:

JOHNSON, III, John E.
BURR & FORMAN LLP
101 South Tryon Street, Suite 2610
Charlotte NC 28280
ETATS-UNIS D'AMERIQUE

Date of mailing
(day/month/year)

23.04.2025

Applicant's or agent's file reference
067481-00255-22-P-0048-WO

IMPORTANT NOTIFICATION

International application No.
PCT/US2024/013439

International filing date (day/month/year)
30.01.2024

Priority date (day/month/year)
09.02.2023

Applicant
Berry Global, Inc.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0

Authorized Officer

Almalé Murillo, J

Tel. +49 89 2399-8059



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 067481-00255-22-P-0048-WO	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/US2024/013439	International filing date (day/month/year) 30.01.2024	Priority date (day/month/year) 09.02.2023	
International Patent Classification (IPC) or national classification and IPC INV. B32B27/12			
Applicant Berry Global, Inc.			
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>7</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. ☒ a total of <u>8</u> sheets, as follows: ☒ sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions). ☐ sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4bis, 70.2(e), 70.16 and 91.2). ☐ superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No. I and the Supplemental Box (see Rule 70.16(b)). b. ☐ a separate electronic file containing a sequence listing (<i>sent to the International Bureau only</i>)			
4. This report contains indications relating to the following items: ☒ Box No. I Basis of the report ☐ 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 Article 35(2) with regard to novelty, inventive step or 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			
Date of submission of the demand 06.12.2024		Date of completion of this report 23.04.2025	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0		Authorized officer Sanchez Perucha, A Telephone No. +31 70 340-2972 	

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US2024/013439

Box No. I Basis of the report

1. With regard to the **language**, this report is based on
 - ☒ 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 (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a) and (b))
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-24 as originally filed

Claims, Numbers

1-15 filed with the letter of 12-03-2025

Drawings, Sheets

1/9-9/9 as originally filed

- ☐ a sequence listing - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rules 70.2(c) and (c-bis)):
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 5. ☐ This report has been established:
 - ☐ taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-bis) and 70.2(e)).
 - ☐ without taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91(Rules 66.4bis and 70.2(e)).

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/US2024/013439

6. ☒ With regard to top-up searches (Rules 66.1 *ter* and 70.2(f)):
- ☒ A top-up search was carried out by this Authority on 10.04.2025 (all discovered documents are listed in the Supplemental Box Relating to Top-up Search).
 - ☐ Additional relevant documents have been discovered during the top-up search.
 - ☐ No top-up search was carried out by this Authority because it would serve no useful purpose.
7. ☐ Supplementary international search report(s) from Authority(ies) has/have been received and taken into account in establishing this report (Rule 45bis.8(b) and (c)).

* If item 4 applies, some or all of those sheets may be marked "superseded".

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-15</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-15</u>
Industrial applicability (IA)	Yes: Claims	<u>1-15</u>
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

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 WO 2004/051019 A1 (BAKOR INC [CA]; BORENSTEIN LIONEL [CA]) 17 June 2004 (2004-06-17)
- D2 US 2022/170262 A1 (LOLLEY KEITH A [US]) 2 June 2022 (2022-06-02)
- D3 US 2016/176168 A1 (ZHAO RONGGUO [US]) 23 June 2016 (2016-06-23)
- D4 US 2021/309891 A1 (SCHOENBRODT SIMON [CH] ET AL) 7 October 2021 (2021-10-07)
- D5 US 2012/034837 A1 (NGAI MOU CHUNG [NL]) 9 February 2012 (2012-02-09)
- D6 US 2017/198470 A1 (HICKIE BRIAN ANDREW [US] ET AL) 13 July 2017 (2017-07-13)

The following document was not cited in the international search report.

- D7 US 2004/180195 A1 (MACUGA JAMES A [US]) 16 September 2004 (2004-09-16)

- 1 The arguments of the Applicant in their letter of 12.03.2025 have been carefully considered.

NOVELTY & INVENTIVE STEP - ARTICLES 33(2) & 33(3) PCT

- 2 The Applicant seems to concede that D1 discloses a laminate as the one claimed in the present application wherein the adhesive layer profile is equal as the one presented in Fig. 6. However, the Applicant argues that present independent claim 1 relates to adhesive patterns such as those illustrated in Figs. 3-5,7,12 and not like the one disclosed in Fig. 6.
- 3 The arguments of the Applicant cannot be respectfully followed due to the following reasons:
 - 3.1 Present independent claim 1 has been amended to introduce partial features of original dependent claims 9 and 10 as discussed in Item VIII below. In this sense, the adhesive layer claims a profile as the one disclosed in fig. 12 of the

present application. As the present application discloses, there remains a need in the art for a self-adhering article that **negates the need for the use of mechanical fasteners** for attachment to buildings of interest.

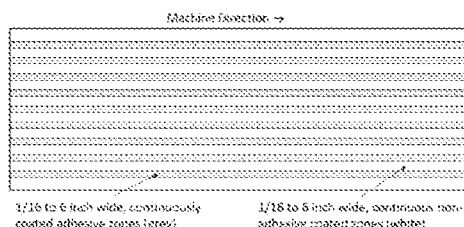


FIGURE 12

- 3.2 As discussed in the communication dated 06.05.2024, D4 discloses the application of adhesive layers consisting of discontinuous spaced-apart segments including different discrete zones, as the ones claimed, (fig. 2; claims 6,7).

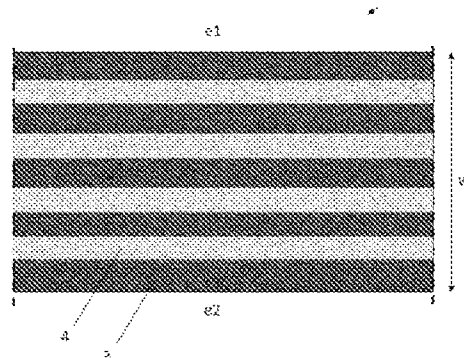


Fig. 2

- 3.3 To stress that the use of adhesive layers having the specific profile claimed is common within the field of building wraps, D7 is introduced. D7 also discloses adhesive layers as the one claimed, (figs. 8C, 8D, 8H, 8K; §0042-0043).
- 3.4 D7 further discloses that "*the present invention provides a housewrap having an integral adhesive attachment means (e.g., an adhesive layer), **whereby nails and staples are not necessary**, thereby eliminating the disadvantages associated therewith*", (§0008).
- 3.5 As shown below, the adhesive layer disclosed in D7 as fig. 8K discloses that "*the adhesive layer comprises a **discontinuous layer** of an adhesive composition defining a plurality of **discrete zones of the adhesive composition** and a plurality of discrete zones **devoid of the adhesive composition**, the plurality of discrete zones of the adhesive composition include (a) a first discrete zone of the adhesive composition **at or proximate to the first***

*end, (b) a second discrete zone of the adhesive composition **at or proximate to the first-second end.** and (c) a plurality of intermediate discrete zones of the adhesive composition located between the first discrete zone and the second zone of the adhesive composition; wherein (a) the plurality of discrete zones of the adhesive composition and the plurality of discrete zones devoid of the adhesive composition **extend along a machine direction** and are provided in alternating fashion, **or** (b) the plurality of intermediate discrete zones of the adhesive composition are surrounded by a **continuous region devoid of the adhesive composition.***

- 3.6 The adhesive layer disclosed in D7 shares all the essential technical features of the adhesive layer claimed.

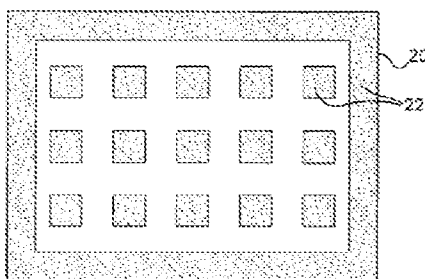


Figure 8K

- 3.7 Therefore the subject-matter of present independent claim 1 does not involve an inventive step over the teachings of D1 and D4/D7.

Re Item VII

- 4 Contrary to the requirements of Rule 5.1 (a) (ii) PCT, the relevant background art disclosed in the documents D1, D4 and D7 is not mentioned in the description, nor are these documents identified therein.

Re Item VIII

ARTICLES 19(2) & 34 PCT - AMENDMENT OF THE CLAIMS

- 5 The Applicant concentrated on Articles 33(2) & 33(3) PCT in their letter of reply dated 12.03.2025 in view of D1, however, the objections under Articles 6, 19(2) & 34 PCT made with letter dated 16.01.2025 have not been addressed and therefore still prevail.
- 5.1 Present independent claim 1 has been amended by incorporating the following features:
- 5.2 *the non-woven fabric has a first end and a second end along a cross-direction - part of original claim 10.*

- 5.3 *the non-woven fabric is located in between and in contact with the first VPLI film*
- pag. 2, lines 27-32.
- 5.4 The subject-matter of original dependent claims 9 and 10 has, however, not being included completely in present independent claim 1. For instance, original claim 9 refers to "*a plurality of discrete zones of the adhesive composition surrounded by a continuous zone devoid of the adhesive composition*", however, these features are not present in the independent claim 1. Also the "*different coating areas*" claimed in original claim 10 are not present in claim 1.
- 5.5 It follows that the amendments carried out contravene Articles 19(2) & 34 PCT.

ARTICLE 6 PCT - CLARITY

- 6 Present independent claim 1 refers to "*a first discrete zone of the adhesive composition at **or proximate** to the first end*". It is not clear how to measure that the adhesive composition is proximate to a specific end of the laminate, therefore the subject-matter of claims 1 and 15 lack clarity.
- 6.1 Present independent method claim 12 seems not to contain all the essential technical features of present independent product claim 1. It should be noted that according to Article 6 PCT any independent claim must contain all the technical features essential to the definition of the invention. It is indeed particularly burdensome for a skilled person to identify the actual essential features of the invention and thus to establish the subject-matter for which protection is sought, and this results in a lack of clarity under Article 6 PCT.
- 6.2 The subject-matter of new claim 15 should be included in the independent method claim 12 ensuring that the wording between independent claims is consistent.

IN THE EUROPEAN PATENT OFFICE
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

APPLICANT: BERRY GLOBAL, INC.
INTERNATIONAL APPLICATION NO.: PCT/US2024/013439
INTERNATIONAL FILING DATE: 30 JANUARY 2024
TITLE: SELF-ADHERING ARTICLE

Authorized Officer: A. Sanchez Perucha

European Patent Office
D-80298 Munich

RESPONSE TO THE SECOND
WRITTEN OPINION ON PRELIMINARY EXAMINATION

Dear Officer Perucha:

This communication is in response to the Written Opinion, dated 16 January 2025, from the International Preliminary Examining Authority (IPEA). Applicants have submitted herewith amendments under Article 34, as described more fully below, to correct certain defects in the claims and to more particularly distinguish the claimed invention from the cited references. In addition and as also described more fully below, Applicants have provided remarks explaining the patentability of the claimed invention to overcome the defects noted in the Written Opinion. Applicants respectfully request reconsideration in light of these amendments and remarks and issuance of a favorable International Preliminary Report on Patentability.

In accordance with the Article 34 amendments, independent claims 1 has been amended to correct a typographical error resulting from the previous response. A “marked-up” copy of the claims has been provided to easily identify the claim amendments. A clean copy of the amended claims is also provided with this response.

For the reasons provided below, Applicants respectfully submit all claims as set forth in the clean copy of the amended claims, as submitted under Article 34 on even date herewith, are patentable over the cited references.

REMARKS

The Written Opinion (WO) finds that claims 1-3, 7, and 9 are anticipated, while claims 4-6 and 8-15 lack inventive step. In particular, the WO finds that claims 1-3 and 7 are anticipated by WO 2004/051019 (D1). The following documents were cited for allegedly teaching various features recited in the dependent claims: US 2022/170262 (D2); US 20161/76168 (D3); US 2021/309891 (D4); US 2012/034837 (D5); and US 2017198470 (D6).

At the outset, Applicant notes that independent claim 1 recites particular adhesive coating patterns that are illustrated by example embodiments illustrated in Figures 3-5, 7, and 12 of the present application.

The Examiner argues that D1 teaches a weather resistive barrier comprising a first nonwoven fabric attached to a first microporous film, and a layer of adhesive is applied to the first nonwoven fabric. The Examiner argues that D1 teaches that the adhesive pattern is discontinuous (e.g., covers about 75% of the surface area), in which the adhesive pattern included circular adhesive-free zones surrounded by an adhesive matrix. The Examiner notes that this pattern of D1 corresponds to Figure 6 of the present disclosure, but appears to concede that D1 does not teach the adhesive patterns of Figures 3-5, 7, and 12 of the present disclosure. However, the Examiner argues that no technical effect has been shown with respect to such adhesive patterns, and that one of skill in the art could employ such an adhesive pattern if they were willing to forgo the express purpose of D1 pertaining to the prevention of lateral movement of air between the membrane and the substrate to which it is bonded or through lap joints of membrane sections.

Applicant notes that D1 is directed to a self-adhering air and moisture barrier sheet membrane for structural surfaces of buildings. The air and moisture barrier sheet membrane is permeable to the passage of water vapor and is comprised of a water vapor permeable sheet onto one surface of which is applied an adhesive in a non-continuous film. D1 expressly teaches that the pattern of the adhesive film is specifically configured to prevent lateral movement of air between the membrane and the substrate to which it is bonded or through lap joints of membrane sections. In this regard, D1 requires a continuous region or “sea” of adhesive with a plurality of “islands” surrounded by but not covered by the adhesive sea. See

page 15, lines 9-18. Figure 1 of D1 illustrates this pattern that is specifically configured to prevent lateral movement of air.

In this regard, would like to clarify that independent claim 1 relates to adhesive patterns such as those illustrated in Figures 3-5, 7, and 12 of the present disclosure, and not Figure 6 of the present disclosure. In this regard, the currently claimed adhesive patterns include a range of possible adhesive patterns that does not prevent the lateral movement of air as required by D1.

Moreover, D1 actually teaches away from the currently claimed invention as noted above. In this regard, any proposed modification of D1 in a manner that adjusts the adhesive pattern therein such that the adhesive pattern no longer prevents lateral movement of air between the membrane and the substrate to which it is bonded is improper. That is, such a modification of D1 would render the self-adhering membranes unsatisfactory for their intended purpose (e.g., prevention of lateral air movement when applied to a substrate). Moreover, any such proposed modification would appear to be based on impermissible hindsight for the sole purpose of constructing an alleged rejection, which is improper in view of D1's express teachings away from such a modification.

As a final matter with respect to D1, Applicant notes that the present disclosure illustrates that the currently claimed invention provides peel strength after low temperature exposure. For instance, Table 2 of the present disclosure compares an inventive example embodiment having an adhesive pattern according to Figure 12 provide drastically superior peel strength after low temperature exposure compared to other commercially available products. In this regard, the claimed adhesive patterns do provide a technical effect.

For at least these reasons, D1 does not render any claims unpatentable.

D2-D6 were merely cited for allegedly teaching certain secondary features recited in dependent claims. These references, however, do not cure the noted deficiencies of D1.

CONCLUSION

All of the points raised by the IPEA and Written Opinion have now been addressed by clear and proper amendments to the claims of the pending application. Accordingly, Applicants respectfully request that a favorable International Preliminary Report on Patentability indicate the same.

Respectfully Submitted,



John E. Johnson, III
Attorney for Applicant
Burr & Forman LLP
101 South Tryon Street, Suite 2610
Charlotte, NC 28280
Tel (704) 347-6479
Fax (704) 347-4467

Docket No.: 067481/00255/22-P-0048-WO

CLEAN CLAIMS

THAT WHICH IS CLAIMED:

1. A self-adhering article, comprising:

(i) a weather resistive barrier comprising a first nonwoven fabric attached to a first vapor-permeable and liquid impermeable (VPLI) film, wherein the nonwoven fabric has a first end and a second end along a cross-direction;

(ii) an adhesive layer comprising an adhesive composition, the adhesive layer being located adjacent the first nonwoven fabric, wherein the first nonwoven fabric is located between and in contact with the first VPLI film and the adhesive layer;

(iii) a release liner located adjacent the adhesive layer, wherein the adhesive layer is located between the first nonwoven fabric and the release liner;

wherein the adhesive layer comprises a discontinuous layer of an adhesive composition defining a plurality of discrete zones of the adhesive composition and a plurality of discrete zones devoid of the adhesive composition, the plurality of discrete zones of the adhesive composition include (a) a first discrete zone of the adhesive composition at or proximate to the first end, (b) a second discrete zone of the adhesive composition at or proximate to the second end, and (c) a plurality of intermediate discrete zones of the adhesive composition located between the first discrete zone and the second zone of the adhesive composition;

wherein (a) the plurality of discrete zones of the adhesive composition and the plurality of discrete zones devoid of the adhesive composition extend along a machine direction and are provided in alternating fashion, or (b) the plurality of intermediate discrete zones of the adhesive composition are surrounded by a continuous region devoid of the adhesive composition.

2. The self-adhering article of claim 1, wherein the first nonwoven fabric comprises at least one spunbond layer, at least one meltblown layer, or any combination thereof.

CLEAN CLAIMS

3. The self-adhering article of claims 1-2, wherein the first VPLI film comprises single layer film, wherein the single layer film is a microporous film or a monolithic film.
4. The self-adhering article of claims 1-2, wherein the first VPLI film comprises multilayer film comprising at least one microporous layer, at least one monolithic layer, or combinations thereof.
5. The self-adhering article of claim 4, wherein the multilayer film comprises a plurality of microporous layers including a first microporous layer and a second microporous layer each independently from each other comprising at least one polyolefin, at least one propylene-containing copolymer, at least one polyethylene, at least one ethylene-containing copolymer, or any combinations thereof.
6. The self-adhering article of claim 4, wherein the multilayer film comprises a plurality of monolithic layers including a first monolithic layer and a second monolithic layer each independently from each other comprises at least one highly breathable polymer comprising at least one of a thermoplastic urethane, a polyether-block-amide copolymer, a polyether-block-ester copolymer, polyester-block-amide copolymer, a copolyester thermoplastic elastomer, or blends thereof.
7. The self-adhering article of claims 1-6, wherein the first VPLI film has a basis weight from about 10 to about 60 gsm, a thickness from about 5 to about 25 mils, or both.
8. The self-adhering article of claims 1-7, wherein the first VPLI film is melt-extruded directly onto the first nonwoven fabric.

CLEAN CLAIMS

9. The self-adhering article of claim 1, wherein the first discrete zone of the adhesive composition defines a first coating area, the second first discrete zone of the adhesive composition defines a second coating area, and the plurality of intermediate discrete zones of the adhesive composition have an average intermediate coating area, and wherein the first coating area and/or the second coating area is larger than the average intermediate coating area.

10. The self-adhering article of claim 9, further comprising (i) a first ratio between the first coating area and the average intermediate coating area from about 2.5:1 to about 10:1, (ii) a third ratio between (a) a total intermediate coating area comprising an aggregate of the plurality of intermediate discrete zones of the adhesive composition, and (b) the aggregate of the first coating area and the second coating area from about 2:1 to about 5:1, or (iii) both (i) and (ii).

11. The self-adhering article of claims 1-10, further comprising a three-dimensional, non-uniform or non-continuous meltblown layer positioned on an outer surface of the first VPLI film, the meltblown layer comprising meltblown shot, meltblown ropes, or both; wherein the meltblown shot, the meltblown rope, or both is randomly and irregularly distributed on the outer surface of the first VPLI film.

12. A method of making a self-adhering article, comprising:

(i) melt extruding a first vapor-permeable and liquid impermeable (VPLI) film directly onto a first surface of a first nonwoven fabric to form a weather resistive barrier;

(ii) depositing an adhesive layer comprising an adhesive composition directly onto a second surface of the first nonwoven fabric, wherein the first nonwoven fabric is located between the first VPLI film and the adhesive layer;

CLEAN CLAIMS

(iii) applying a release liner over and in contact with the adhesive layer, wherein the adhesive layer is located between the first nonwoven fabric and the release liner to form a self-adhering article.

13. The method of claim 12, wherein the step of depositing the adhesive layer comprises a die coating operation, a spraying operation, a blade coating operation, or any combination thereof.

14. The method of claims 12-13, further comprising depositing a three-dimensional, non-uniform or non-continuous meltblown layer positioned on an outer surface of the first VPLI film, the meltblown layer comprising meltblown shot, meltblown ropes, or both; wherein the meltblown shot, the meltblown rope, or both is randomly and irregularly distributed on the outer surface of the first VPLI film.

15. The method of claims 12-14, wherein the nonwoven fabric has a first end and a second end along a cross-direction, and depositing an adhesive layer comprises forming a discontinuous layer adhesive layer of an adhesive composition defining a plurality of discrete zones of the adhesive composition and a plurality of discrete zones devoid of the adhesive composition, the plurality of discrete zones of the adhesive composition include (a) a first discrete zone of the adhesive composition at or proximate to the first end, (b) a second discrete zone of the adhesive composition at or proximate to the second end, and (c) a plurality of intermediate discrete zones of the adhesive composition located between the first discrete zone and the second zone of the adhesive composition;

wherein (a) the plurality of discrete zones of the adhesive composition and the plurality of discrete zones devoid of the adhesive composition extend along a machine direction and are provided in alternating fashion, or (b) the plurality of intermediate discrete zones of the adhesive composition are surrounded by a continuous region devoid of the adhesive composition.

Bitte beachten Sie, dass angeführte Nichtpatentliteratur (wie z. B. wissenschaftliche oder technische Dokumente) je nach geltendem Recht dem Urheberrechtsschutz und/oder anderen Schutzarten für schriftliche Werke unterliegen könnte. Die Vervielfältigung urheberrechtlich geschützter Texte, ihre Verwendung in anderen elektronischen oder gedruckten Publikationen und ihre Weitergabe an Dritte ist ohne ausdrückliche Zustimmung des Rechtsinhabers nicht gestattet.

Bitte beachten Sie, dass das EPA Dokumente der Patentliteratur, die in Recherchen- und Prüfungsverfahren nach dem EPÜ und dem PCT angeführt sind, nicht mehr als Papierkopie per Post versendet. Anmelder, die nicht die Mailbox nutzen, können die betreffenden Dokumente über Espacenet (<https://worldwide.espacenet.com/>) einsehen.

Veillez noter que les ouvrages de la littérature non-brevets qui sont cités, par exemple les documents scientifiques ou techniques, etc., peuvent être protégés par des droits d'auteur et/ou toute autre protection des écrits prévue par les législations applicables. Les textes ainsi protégés ne peuvent être reproduits ni utilisés dans d'autres publications électroniques ou imprimées, ni rediffusés sans l'autorisation expresse du titulaire du droit d'auteur.

Veillez noter que l'OEB n'envoie plus par voie postale de copies papier de la littérature brevet citée dans les procédures de recherche et d'examen au titre de la CBE ou du PCT. Les demandeurs qui n'utilisent pas la Mailbox peuvent accéder à ces documents dans Espacenet (<https://worldwide.espacenet.com/>).

Please be aware that cited works of non-patent literature such as scientific or technical documents or the like may be subject to copyright protection and/or any other protection of written works as appropriate based on applicable laws. Copyrighted texts may not be copied or used in other electronic or printed publications or re-distributed without the express permission of the copyright holder.

Please note that the EPO no longer sends paper copies by post of patent literature cited in search and examination proceedings under the EPC and PCT. Applicants not using the Mailbox can access such documents via Espacenet (<https://worldwide.espacenet.com/>).