

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HUHTAMAKI FLEXIBLE PACKAGING GERMANY GMBH & CO. KG,

Petitioner,

v.

ADAPA FLEXIBLES DENMARK SLAGELSE A/S,

Patent Owner.

PGR2023-00008

Patent 11,260,624

PATENT OWNER'S REVISED MOTION TO AMEND

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UPDATED EXHIBIT LIST

Exhibit No.	Description
2001	US Patent 11,504,954 assigned to Huhtamaki Flexible
2002	U.S. Patent Appl. No. 16425,067 Application File History (in-part)
2003	US Patent App. Pub. No. 20150225151A1 to Osborn et al.
2004	Redline Comparison Between Riis and Osborn
2005	US Patent 11,504,954 NFOA Response dated 11 March 2021
2006	US Patent 11,504,954 FOA Response dated 3 August 2022
2007	Huhtamaki Parent Website - Business Segments
2008	Huhtamaki Parent Website - Contact Us
2009	Huhtamaki Parent Website - Executive Team
2010	Huhtamaki Parent Annual Report 2021
2011	Corrected PHV Affidavit (Timothy P. Getzoff)
2012	EP Application No. 15202962.5 – '624 Priority Application
2013	Curriculum Vitae - Dr. Stephen McCarthy
2014	Declaration of Dr. Stephen McCarthy
2015	Deposition Transcript - Dr. Richard Spontak
2016	Second Declaration of Dr. Stephen McCarthy

I. INTRODUCTION

Patent Owner ("Adapa") moves under 35 U.S.C. 326(d) to amend U.S. Patent No. 11,260,624 ("the '624 Patent"). Specifically, Adapa moves to amend the '624 Patent to (1) cancel, without prejudice or disclaimer, claims 2 and 3 prior to the decision being rendered for this trial and (2) contingently include substitute claims for issued claims 1 and 4–13, subject to the outcome of this trial.

This Motion and the substitute claims meet the requirements of 35 U.S.C. 326(d), 37 CFR 42.24, 37 CFR 42.221, and the Motion to Amend (MTA) Pilot. Thus, Adapa respectfully requests that the Board grant this Motion, thereby canceling claims 2 and 3 prior to rendering its decision and, in the event the Board finds any of claims 1 and 4–13 unpatentable, issuing the corresponding substitute claims presented herein.

Though Adapa does not bear the burden of either persuasion or production regarding the patentability of the proposed substitute claims, this Motion and Dr. McCarthy's declaration (EX2016) demonstrate that the proposed substitute claims are patentable over the asserted references at issue in this proceeding.

II. THIS MOTION AND THE SUBSTITUTE CLAIMS MEET ALL THE REQUIREMENTS OF 35 U.S.C. 326(D), 37 CFR 42.24, 42.221, AND THE MTA PILOT

A. This Motion submits a reasonable number of substitute claims and clearly shows the changes sought for each conditionally canceled claim.

For each challenged claim for which substitution is sought, only one substitute claim is proposed. *See* § V (Claims Appendix – Marked). Also, the

changes sought for each substitute claims are clearly shown relative to corresponding existing claims using amendment markings.

B. This Motion sets forth support for each substitute claim in the original disclosure of the patent and an earlier-filed disclosure for which benefit of the filing date is sought.

The '624 Patent issued from U.S. App. No. 16/835,018¹ ("018 App")², filed on March 30, 2020, as a continuation of U.S. App. No. 15/780,999, filed on June 1, 2018, as a 371 of Int'l App. No. PCT/EP2016/082876, filed on December 29, 2016, and claiming benefit to EP App. No. 15202962.5 ("962 App")³, filed on December 29, 2015.

Support for each substitute claim is shown in the following table. The content corresponding to the claim limitations in the following table may be found in § VI (Claims Appendix — Clean and Labeled), *infra*.

Lim.	Support in the '018 App (EX1002) and the '962 App (EX2012)
[14A]	"In a first aspect this [the "needs" described in the preceding paragraph] is solved by a method for providing, e.g., an aggressive chemical-resistant film." EX1002 ¶ [0010]; EX2012, 2:34-35. "In an embodiment of the disclosure, the film is used to wrap a composition comprising a chemical selected from nicotine, fentanyl, lodicine [sic], and rivastigmine." EX1002 ¶ [0050]. "In an embodiment the laminate encloses a compound selected from the group consisting of nicotine, rivastigmine, fentanyl, and lidocaine." EX2012, 2:34-35.

¹ Adapa appreciates the Board's identification of the "108" clerical error in the initial MTA.

² The '018 App is reproduced at EX1002, 309 (EX1002 (Part 3), 134).

³ The '962 App is reproduced as EX2012.

[14B]	The disclosure contemplates "a method for providing the packaging [of] the chemical substance, said method comprising the steps of: a) providing a base layer." EX1002 ¶ [0066]; EX2012, 10:23–27. The disclosure provides that the "base layer, which is water and/or oxygen resistant, is selected from the group consisting of a metal foil, preferably aluminum foil." EX1002 ¶ [0023]; EX2012, 9:9-10. "The coextrusion layer may be coated to the aluminium layer by a coextrusion system." EX1002 ¶ [0117]; EX2012, 14:12-13. "To further improve the mechanical wear resistance of the film a first outer layer may be laminated to the base layer side of the film." "Hence, in figure 3 is illustrated a cross section of an embodiment of a laminate according to the disclosure, 12, comprising a first outer layer, 21, a base layer, 22, and a coextrusion layer, 25. The first outer layer, 21 and the base layer side, 22, may be laminated together before, during or after the coextrusion layer 25 is applied/coated to the base layer." EX1002 ¶ [0123]; EX2012, 15:6–12.
[14C]	The disclosure contemplates "a method for providing the packaging [of] the chemical substance, said method comprising the steps of . . . b) coextruding a layer comprising a tie layer and a contact layer to provide a coextrusion layer." EX1002 ¶ [0066]; EX2012, 10:28-29. "In one preferred embodiment, the contact layer comprises a polymer selected from the group consisting of a cyclic olefin copolymer (COC), a polyamide (PA), or[] an ethylene vinyl alcohol." EX1002 ¶ [0034]; EX2012, 6:30-31.
[14D]	The disclosure contemplates "a method for providing the packaging [of] the chemical substance, said method comprising the steps of . . . c) coating the coextrusion layer to the base layer." EX1002 ¶ [0066]; EX2012, 10:30. The disclosure provides that the "base layer, which is water and/or oxygen resistant, is selected from the group consisting of a metal foil, preferably aluminum foil." EX1002 ¶ [0023]; EX2012, 9:9-10. "The coextrusion layer may be coated to the aluminium layer by a coextrusion system." EX1002 ¶ [0117]; EX2012, 14:12-13.
[14E]	The disclosure contemplates "a method for providing the packaging [of] the chemical substance, said method comprising the steps of . . . d) allowing the coextrusion layer coated to the base layer to adhere to the

	base layer to provide a chemical resistant film comprising the tie layer and the contact layer formed as an [sic] coextrusion layer coated to the base layer." EX1002 ¶ [0066]; EX2012, 10:31–34.
[14F]	"In one embodiment the tie layer is made of 1, 2, 3, 4, or 5 layers." "All the layers are coextruded with the contact layer for a simplified processing." EX1002 ¶¶ [0028], [0029]; EX2012, 6:3–9. "[I]n one embodiment, the tie layer or plurality of tie layers constituting the tie layer, has a loading in the range of 7 to 20 g/m² and/or the contact layer has a loading in the range of 4 to 20 g/m², and the loading of the laminate is not more than 40 g/m²." EX1002 ¶ [0043]; EX2012, 8:12–15. "In the embodiment illustrated, the tie layer, 3, comprises two layers. These layers may be made of EAA as the first layer, 3a, and polyethylene (PE) as the second layer, 3b." EX1002 ¶ [0121] & FIG. 3; EX2012, 14:34–15:2. "For the co-extrusion layers, the loading of the tie layers was between 4–18 g/m² and the loading of the contact layer was 8–12g/m²." EX1002 ¶ [0147]; EX2012, 19:1–6. See also, the additional analysis provided following this table.
[15A]	See claim elements 14A and 14F, <i>supra</i> .
[16A]	See claim elements 14A and 14F, <i>supra</i> .
[17A]	See claim elements 14A and 14F, <i>supra</i> .
[18A]	See claim elements 14A and 14F, <i>supra</i> .
[19A]	See claim element 14A, <i>supra</i> .
[19B]	See claim element 14F, <i>supra</i> .
[19C]	"Hence, in the context of the present disclosure aggressive chemical-resistant film means that no more than 1% of the original amount of API to be packaged (or sometimes no more than 10%) is migrated into the packaging material after 24 weeks. Typically, the degree of uptake is complete after 12 weeks or less." EX1002 ¶¶ [0033]; EX2012, 6:26–29.
[20A]	See claim elements 14A and 14D, <i>supra</i> .
[21A]	See claim elements 14A and 14F, <i>supra</i> .
[22A]	See claim element 14A, <i>supra</i> .
[22B]	See claim element 14F, <i>supra</i> .

[22C]	"In a particular embodiment . . . wherein the composition is provided as a patch, the amount of the aggressive chemical substance remaining . . . [is compared] to a Barex® patch as index 100." EX1002 ¶ [0051]. "A lidocaine patch containing 40 mg lidocaine was wrapped in the pouch, packaged and stored at 40°C for seven days." EX1002 ¶ [0157]; EX2012, 20:9–11.
[22D]	"Stability of the API is important . . . [a] value of 90% - 110% of the original does after one week when stored at 40°C using Barex® as index 100 is considered acceptable." "As can be seen from figure 5, both inventive laminates have a lower value than the index 100 Barex® comparative product, however with at [sic] a value within the acceptable limits." "The lower value of the laminates according to the invention indicates that more lidocaine has disappeared from the patch." EX1002 ¶¶ [0158], [0159] & FIG. 5; EX2012, 20:16–26. "A known polymer that fulfils the requirements of extreme chemical resistance and inert properties is a polyacrylonitrile [sic] (PAN) based film, which is sold for example as resins under the trademark Barex®." EX1002 ¶ [0005], EX2012, 1:30-31.
[23A]	See claim elements 14A and 14F, <i>supra</i> .
[24A] – [24G]	See claim elements 14A through 14F, <i>supra</i> .

Numerical limitations that fall within embodiments in the original specification meet the written description requirement so long as the broader range does not clearly pertain to a different invention than the narrower claimed range. *In re Wertheim*, 541 F.2d 257, 263–265 (CCPA 1976)⁴ (c.f., *Indivior UK Limited v.*

⁴ In *In re Wertheim*, the specification included a range of "25%-60%." A claim limitation to "at least 35%" failed the description requirement for having no upper limit; however, the claim limitation "between 35% and 60%" *met* the description requirement. See MPEP 2163.05(III).

Dr. Reddy's Laboratories S.A., 18 F.4th 1323, 1328, 1329 (Fed. Cir. 2021) (finding that a claimed range not expressly⁵ stated in the specification and "cobbled" together from *specific particular examples*⁶ in the application may not be supported).

Despite being disclosed in both the '018 App and the '962 App, Adapa provides an explanation of how a POSITA would have understood these applications as disclosing individual, per-layer loading ranges for a multi-layer tie layer. Specifically, in both the '018 App and the '962 App, the total loading range of a tie layer, or plurality of tie layers, is expressly stated as being in the range of 7 to 20 g/m², which supports a per-tie layer loading of 7 to 20 g/m².⁷ Moreover, when the disclosed range of 7 to 20 g/m² is directed to a single tie layer/multi-layer tie layer, the disclosed range supports per-layer loading ranges that meet a total multi-layer tie layer loading range between 7 and 20 g/m² (e.g., the following ranges are supported for a two-layer tie layer: 3 g/m² and 4 g/m² (total loading of 7 g/m²); .01 g/m² and 19.99 g/m² (total loading of 20 g/m²); 7 g/m² and 13 g/m² (total loading of 20 g/m²); etc.). See EX2016 ¶ 123.

⁵ When a range is not expressly disclosed in the application, a patent owner may be required "to do more than present [the Board] with a list of paragraphs" and to "explain how . . . the application discloses the claimed . . . range." *NeuroDerm Ltd. v. AbbVie Inc.*, PGR2022-00040, Paper 77, at 23 (PTAB Oct. 31, 2023).

⁶ See e.g., *In re Lukach*, 442 F.2d 967, 969 (CCPA 1971) (a single example disclosing a ratio of 2.6 did not alone support the recited range from 2.0 to 3.0).

⁷ The Board agrees. Preliminary Guidance, 7.

Here, the claimed per-layer loading ranges of 1 to 14 g/m² (in Substitute Claim 15), 7 to 20 g/m² (in Substitute Claim 18), and respective per-layer loading ranges of 1 to 14 g/m² and 5 to 19 g/m² (Substitute Claim 17) fall within the disclosed per-layer loading ranges. Accordingly, support for each substitute claim can be found in the original disclosure of the patent and the earlier-filed disclosure for which benefit of the filing date is sought. *See* EX2016 ¶ 124.

C. None of the contingent substitute claims introduce new subject matter.

The proposed substitute claims are supported by the original non-provisional application from which the '624 Patent issued and by the Priority Application to which the '624 Patent claims benefit. *See* § II.B, *supra*. Thus, the proposed substitute claims do not introduce new subject matter. *See* EX2016 § X.C.

D. None of the contingent substitute claims enlarge the scope of the claims.

With reference to § V (Claims Appendix — Marked), *infra*:

Substitute independent claims 14 ("Claim 14") and 24 clarify antecedent basis of claim terms (e.g., "the film"), add narrowing features, or remove certain features relative to independent claims 1 and 13. That said, the removed features only involve replacing claim terms with narrower claim terms or addressing grammatical informalities.

Substitute dependent claims 15–23 clarify antecedent basis of claim terms, add narrowing features, or remove certain features relative to dependent claims 4–12. That said, the removed features only involve updating the dependencies,

improving consistency with the scope of Claim 14, narrowing ranges, or addressing grammatical informalities.

Thus, none of the contingent amendments enlarge the scope of the issued claims in the '624 Patent. *See* EX2016 § X.B.

E. Each contingent amendment is responsive to a ground of unpatentability involved in this proceeding.

Petitioner asserted in the Petition requesting institution of post-grant review that claims 1–13 of the '624 Patent are unpatentable on the grounds of indefiniteness under 35 U.S.C. 112 and obviousness under 35 U.S.C. 103. The proposed substitute claims are responsive to one or more grounds of unpatentability at issue in this proceeding at least because the amendments enhance clarity of the claims, introduce features that add additional distinguishing features that are not rendered obvious by the asserted references, or both. *See* EX2016 § X.D.

F. Any new amendments, arguments, or evidence submitted with this Motion are responsive to issues raised in the Board's Preliminary Guidance on Patent Owner's Motion to Amend ("PG") and/or Petitioner's Opposition to Patent Owner's Motion to Amend ("Opposition").

The subject matter of the revised substitute claims submitted in this Motion includes similar subject matter as the revised substitute claims submitted in the initial MTA and, among other issues, is related to the per-layer loading ranges raised in the Opposition and the PG. Thus, any new amendments, arguments, or

evidence submitted in this Motion are responsive to issues raised in the Opposition and the PG. *See* EX2016 § X.D.

III. THE SUBSTITUTE CLAIMS ARE PATENTABLE OVER THE PRIOR ART

The proposed substitute claims are patentable over the asserted references at issue in this proceeding for at least the reasons provided herein.

A. Summary of Holzmuller

Holzmuller discloses multi-layered laminates that are used to form tubes and have an embedded aluminum layer surrounded on each side by a coextruded intermediate layer material and an exterior oriented coextruded protection layer. EX1034, Abstract; FIGs. 1–7; *see also* EX2016 § VIII.B. Holzmuller's figure 2, depicts a representative laminate including cover layers⁸ 10, oriented polymer layers⁹ 20, first bonding layers¹⁰ 43, second bonding layers¹¹ 45, and the aluminum layer 50. EX1034, FIG. 2; ¶¶ [0042]–[0052]. Holzmuller also provides sets of preferred thickness ranges for the layers. *Id.* ¶ [0019]. Also, in Holzmuller's figure 2, the laminate includes an upper coextruded protective layer 30, a lower

⁸ "Polyethylene (PE), polypropylene (PP), polyethylene terephthalate (PETP), polyethylene terephthalate glycol (PETG), and mixtures [thereof] " are listed as possible materials. EX1034, ¶ [0018].

⁹ PP and polyethylene terephthalate (PET) are listed as possible materials. *Id.*

¹⁰ "Maleic acid anhydride (MSA), ethylene methacrylate (EMA), ethyleneacrylic acid copolymers (EAA), ionomers, terpolymers (ethyleneacrylic acid-maleic acid ester anhydrides), ethylene vinyl acetates (EVA), modified olefins, mixtures [thereof]" are listed as possible materials. EX1034, ¶ [0018].

¹¹ Polyolefins (especially PE) and PP are listed as possible materials in addition to the materials listed of the first bonding layers 43. *Id.*

coextruded protective layer 30, the intermediate layer material A 40, and the intermediate layer material I 40'. The intermediate layer material and oriented coextruded protective layer protect the embedded aluminum layer because diffusible substance must diffuse through these layers before reaching the embedded aluminum layer. *Id.* ¶ [0011]. The purported technical advantage of these layers is that improved barrier properties are achieved with thinner layer thicknesses. *Id.* ¶ [0008].

With regard to forming a laminate, Holzmuller describes that the intermediate layer materials can be coated to both sides of the aluminum layer in back-to-back or joint extrusion steps. *Id.* ¶ [0024]. Holzmuller further describes that layers forming the intermediate layer material are coextruded and/or extruded immediately one after the other. *Id.* ¶ [0026]. Holzmuller also describes that the oriented coextruded protective layer is produced by stretching (especially biaxially) a coextrusion of a polymer layer with one or more cover layers. *Id.* ¶ [0025].

Holzmuller, however, is silent on how the oriented coextruded protective layer is incorporated into the film. *See* EX2016 ¶ 75. That said, a POSITA would understand that the process for incorporating the oriented coextruded protective layer would be required to maintain the orientation of the oriented coextruded protective layer. *See id.* Thus, a POSITA would understand that processing

techniques that expose the oriented coextruded protective layer to high temperatures (such as coextrusion coating¹²) would be unworkable for incorporating the oriented coextruded protective layer into the film since high temperatures would remelt the polymer and therefore destroy the orientation. *See id.* Accordingly, a POSITA would understand that, instead of coextrusion coating the intermediate layer material and oriented coextruded protective layer to the aluminum layer, a lower temperature processing technique would be required to fix the oriented coextruded protective layer to the embedded aluminum layer. *See id.* For example, after coextruding the intermediate layer material onto the aluminum layer and allowing the intermediate layer to cool, the oriented coextruded protective layer could be laminated to the aluminum layer by the cooled, though still molten, intermediate layer material at a temperature low enough¹³ to preserve the orientation of the oriented coextruded protective layer. *See id.*

Holzmuller provides a partial reduction to practice of the laminate of figure 2, where the first bonding layers 43 have a layer thickness of 14 μm (.55 mil) and the second bonding layers 45 have a layer thickness of 34 μm (1.34 mil) but does not disclose the materials used for the layers. EX1034 ¶ [0036]. Assuming, *arguendo*, that the first bonding layers 43 use EAA and the second bonding layers

¹² Which requires all the coextruded layers to be processed at the same temperature.

¹³ The temperature would have to be lower than the melting point of the oriented polymer in the oriented coextruded protective layer. *Id.*

45 use LDPE, then by Petitioner's conversion, the first bonding EAA layers would have a loading of 13.08 g/m², and the second bonding LDPE layers 45 would have a loading of 32.69 g/m². *See* EX2016 ¶ 81.

B. A POSITA would not combine Riis and Holzmuller because Riis's and Holzmuller's films are structurally, functionally, and polymerically different and are formed using fundamentally different processes.

Holzmuller discloses a laminate that has an embedded aluminum layer enveloped by coextruded intermediate layer materials (which purportedly can include EAA and PE layers) and separately formed oriented coextruded protective layers that are fixed to the aluminum layer using low temperature means — e.g., using the coextruded bonding layers of the intermediate material layer to laminate the oriented coextruded protective layer to the aluminum layer. *See* § III.A, *supra*. Also, in Holzmuller, the intermediate layer and the oriented coextruded protective layer are intended to *slow, not stop*, the diffusion of a packaged substance to the embedded aluminum layer. *See id.*; *see also* EX2016 ¶ 138. Furthermore, Holzmuller is silent on including COC in any layer, not to mention the innermost oriented coextruded protective layer. *See id.*

By contrast, Riis discloses a three-layer coextrusion of an EAA layer, an LDPE layer, and a COC¹⁴ layer, which is coextrusion coated to an Al layer of a

¹⁴ COC is known for its processing difficulty.

multi-layer base film. *See* EX2016 ¶ 139. In Riis, the COC layer¹⁵ is intended to *limit* the uptake of an active pharmaceutical ingredient in the substance to a threshold amount. *See id.*

Accordingly, Holzmuller and Riis disclose "structurally" and "polymerically" different films and coextrusion layers that are formed using fundamentally different processes, and a POSITA would not have a reasonable expectation of success in applying the thickness ranges for the layers of the polymerically and structurally different two-layer coextrusion in Holzmuller to the .17 mil EAA layer and the .65 mil LDPE layer of the three-layer coextrusion in Riis's Film. *See* EX2016 ¶ 140. Indeed, Petitioner's only evidence that the thickness ranges in Holzmuller can be applied to the .17 mil EAA layer and the .65 mil LDPE layer in Riis is Dr. Spontak's conclusory statements (EX1037 ¶ 127), which give no consideration to the different film manufacturing and coextrusion layer processes in Holzmuller and Riis, the orientation of the oriented coextruded protective layer in Holzmuller's film, or the additional complexity associated with coextruding COC. *See id.*

Moreover, Riis teaches away¹⁶ from using multi-layer tie layers providing that a "multifunctional layer is preferably formulated to aid in the adherence of one

¹⁵ In Riis, COC is intended to be the innermost layer that contacts a substance.

¹⁶ "[E]ven if a reference is not found to teach away, its statements regarding preference are relevant to a finding regarding whether a skilled artisan would be

layer to another layer without the need of using separate adhesives." *See* EX2016 ¶ 141; EX1004 ¶ [0071].¹⁷ Thus, in addition to the manufacturing incompatibilities of Holzmuller and Riis, a POSITA would be discouraged from modifying Riis to include a multi-layer bonding layer from Holzmuller. *See id.*

Additionally, Holzmuller and Riis disclose "functionally" different films. That is, Holzmuller is concerned with slowing diffusion of a packaged substance to an embedded aluminum layer instead of limiting a diffusion of the substance to a threshold amount as required by Riis. *See* EX2016 ¶ 142.

Accordingly, Riis and Holzmuller are structurally, functionally, and polymerically different, and a POSITA would not be motivated to combine Riis and Holzmuller and would not have a reasonable expectation of success in doing so.

C. Holzmuller's superficial disclosure does not enable a POSITA to make the film alleged by Petitioner, and thus does not support an obviousness rejection.

Holzmuller discloses a single functional example in which a first bonding layer 43 has a thickness of 14 µm and a second bonding layer 45 has a thickness of

motivated to combine that reference with another reference." *Polaris Indus. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1069 (Fed. Cir. 2018).

¹⁷ Thus, based on reading Riis, a POSITA would be led in a direction divergent from including multiple adhesive layers between the .43 mil Al layer and the .34 mil COC layer in the Film. *See Polaris*, 1069.

34 μm .¹⁸ *See* § III.A, *supra*. Holzmuller further lists, for the first bonding layer 43, at least seven (7) possible materials that may be used individually or combined, and, for the second bonding layer 45, at least nine (9) possible materials that may be used individually or combined. Thus, just looking at the individual materials, Holzmuller describes sixty-three¹⁹ possible material combinations.²⁰ *See* EX2016 ¶ 145. Holzmuller also lists thickness ranges for the first bonding layer 43 and the second bonding layer 45 that, most preferably, range from 10 to 50 μm . Thus, within the most preferable range, Holzmuller describes at least 1,600²¹ possible thickness combinations. *See id.* Together, Holzmuller encompasses at least 100,800²² material/thickness combinations. *See id.* Given the high number of material/thickness combinations, the iteration required to achieve the claimed loading range²³, and the likely effect of changing one layer's thickness on another layer's thickness, it would require undue experimentation for a POSITA to modify

¹⁸ It can be assumed from the disclosure of Holzmuller, which is primarily concerned with achieving improved barrier properties with thinner layer thicknesses, that the disclosed layer thicknesses were near what was achievable in Holzmuller. Thus, a POSITA would be unlikely to pursue thinner layers.

¹⁹ (7 choose 1) times (9 choose 1) = 63

²⁰ Looking at two-material combinations, Holzmuller describes 756 possible material combinations.

²¹ (40 choose 1) times (40 choose 1) = 1600; assuming a 1 μm granularity.

²² (63 choose 1) times (1600 choose 1) = 100,800

²³ Which requires reducing the thickness of the second bonding layer 45 by 40%.

Holzmuller to arrive at a coextrusion layer that includes EAA and LDPE layers having the claimed loading ranges.²⁴ *See id.* Thus, Holzmuller is not self-enabled.

Even though a non-enabling reference can play a role in an obviousness analysis "[i]f an obviousness case is based on a non-self-enabled reference, and no other prior art reference or evidence would have enabled a skilled artisan to make the claimed invention, then the invention cannot be said to have been obvious." *Raytheon Techs. Corp. v. GE*, 993 F.3d 1376, 1377 (Fed. Cir. 2021).²⁵ Petitioner provides no other prior art reference or evidence establishing that a POSITA could have made, from Holzmuller's disclosure, a film including a first bonding layer 43 of EAA and a second bonding layer 45 of LDPE having loadings within the claimed per-layer loading ranges. Thus, Holzmuller amounts to no more than a listing of possible materials for adjacent bonding layers and a disconnected and unsupported statement of per-layer thickness ranges for the adjacent bonding layers.

Thus, Riis, in view of Holzmuller, fails to render obvious the Substitute Claims.

²⁴ "[M]ere naming or description of the subject matter is insufficient [to provide an enabling disclosure], if it cannot be produced without undue experimentation." MPEP 2121.01.

²⁵ Finding a non-self-enabled reference incapable of establishing obviousness where no "other evidence to establish that a skilled artisan could have made the" engine claimed in the reference. *Raytheon*, 1382.

D. As Holzmuller cannot be combined with Riis, Petitioner has failed to disclose ranges that include or overlap with the claimed ranges in the Substitute Claims.

Since a POSITA would not have a reasonable likelihood of success in modifying Riis with Holzmuller, Petitioner has failed to establish, by a preponderance of the evidence, that a POSITA would modify Riis's .17 mil EAA layer and Riis's .65 mil LDPE layer to meet the claimed ranges in the substitute claims. Accordingly, Petitioner fails to provide ranges for the .17 mil EAA layer and Riis's .65 mil LDPE layer that overlap with or include the claimed ranges in the Substitute Claims. Thus, the Substitute Claims are allowable over Riis and Holzmuller even in the absence of evidence of criticality.

Nevertheless, if a particular claimed range produces a "new and unexpected result which is different in kind . . . such ranges are termed 'critical' ranges." *In re Aller*, 220 F.2d 454, 456 (CCPA 1955). Evidence of criticality of the claimed ranges can be found throughout the '624 Patent. *See* EX1001, 2:63–67; 6:1–13, 24–28; EX2014 ¶¶ 57–65, 68–70.

E. Riis and Holzmuller fail to render obvious Claim 14.

1. Riis fails to teach or suggest a "coextrusion layer consisting of [a] tie layer [comprising a first layer and a second layer] and [a] contact layer."

As established in this proceeding, Riis's Example 5 discloses an eight-layer film ("Film") having the following structure: .92 mil OPET/ primer/ .42 mil LDPE/ .1 mil EAA/ .35 mil Al foil/ .17 mil EAA/ .65 mil LDPE/ .43 mil COC, where the

.17 mil EAA layer, the .65 mil LDPE layer, and the .43 mil COC layer form a three-layer coextrusion layer. EX1004 ¶¶ [0160], [0165], [0168], and [0174]; *see also* EX2016 ¶ 150.

As established by Adapa in this proceeding, a POSITA would identify the .17 mil EAA layer as primarily serving a tying purpose (i.e., as a tie layer) and the .65 mil LDPE layer as primarily serving a bulking purpose (i.e., as a bulk layer, not a tie layer). *See* EX2016 ¶ 151. Moreover, a POSITA would not identify the .65 mil LDPE layer as a layer of a multi-layer tie layer that includes the .17 mil EAA layer and the .65 mil LDPE layer (which is four times thicker than the .17 mil EAA layer). *See id.*; EX2015, 83:16–22 (Dr. Spontak noting that “[i]f you want it to be used [as an adhesive] in concert with another adhesive like EAA, then you probably want it to be on the thinner side”).

Thus, the three-layer coextrusion layer of Riis fails to disclose a "coextrusion layer consisting of [a] tie layer [comprising a first layer and a second layer] and [a] contact layer," as recited in Claim 14.

2. Holzmuller fails to cure the deficiencies of Riis.

Holzmuller fails to cure the deficiencies of Riis. Low-temperature processes are required to form Holzmuller's laminates to preserve the orientation of the oriented coextruded protective layer. *See* § III.A, *supra*. Thus, manufacturing processes for incorporating the oriented coextruded protective layer into the film

that expose this layer to high temperatures, such as coextrusion coating, are not contemplated in Holzmuller and cannot be used. *See* EX2016 ¶ 152.

Accordingly, Holzmuller fails to disclose a "coextrusion layer consisting of [a] tie layer [comprising a first layer and a second layer] and [a] contact layer," as recited in Claim 14. That is, Holzmuller merely discloses a coextruded intermediate layer material having multiple bonding layers (but no contact layer), and a separate oriented coextruded protective contacting layer having one or more cover layers and an oriented polymer layer (but no tie layer). *See id.*

F. Riis and Holzmuller fail to render obvious Claim 16.

1. Riis fails to teach or suggest a multi-layer tie layer having per-layer loading ranges "in the range of 1 to 14 g/m²."

In accordance with Petitioner's calculations, Riis's .17 mil EAA layer has a loading in the range of 3.97 to 4.15 g/m² and Riis's .65 mil LDPE layer has a larger loading in the range of 15.11 to 15.34 g/m². Petition, 41, 42.

Thus, even if the .17 mil EAA and .65 mil LDPE layers are interpreted as tie layers, or as layers of a multi-layer tie layer, as Petitioner alleges (*see* Petition, 38, 39), the .17 mil EAA layer (having a loading in the range of 3.97 to 4.15 g/m²) and the .65 mil LDPE layer (having a loading in the range of 15.11 to 15.34 g/m²) fail to disclose a first layer and a second layer each having loadings "in the range of 1 to 14 g/m²," as recited in Claim 16. Petitioner acknowledges the same.²⁶

²⁶ Opposition, 16, 19, 20.

Also, it would not be, nor does Petitioner allege in its Opposition that it would be, obvious for a POSITA to modify Riis, on its own, so that the thicknesses of the layers in the Film teach or suggest the per-layer ranges in Claim 16. *See* EX2016 ¶ 155. Indeed, given a POSITA's knowledge, a POSITA would not modify Riis, on its own, so that the layers of Riis's Film meet the per-layer loading ranges of 1 to 14 g/m² during routine experimentation. *See id.*

That is, a POSITA would be discouraged from decreasing the thickness of the .65 mil LDPE layer during routine experimentation out of concern that decreasing the thickness of the .65 mil LDPE layer would be expected to hinder the structural, heat sealable, or barrier properties imparted by the .65 mil LDPE layer. *See* EX2016 ¶ 157; EX2015, 83:9–22 (Dr. Spontak stating "if you wanted to contribute to machinability, mechanical properties, et cetera, then you might want [a bulk layer] to be slightly thicker").

Accordingly, absent undue experimentation or an inventive step, a POSITA would not decrease the .65 mil LDPE bulk layer thickness to arrive at the per-layer loading range of "1 to 14 g/m²" recited in Claim 16. Nor has Petitioner asserted otherwise. Instead, Petitioner alleges that Holzmuller cures Riis's deficiencies. *See* Opposition, 16, 17.

2. Holzmuller fails to cure the deficiencies of Riis.

For at least the reasons stated above, it would not have been obvious for a POSITA to apply Holzmuller "to modify and optimize the interacting thicknesses of the layers of [Riis's] tie layer to promote adhesion²⁷ and to prevent undesirable lamination through routine experimentation," as alleged by Petitioner. *See* Opposition, 16, 17. That is, Holzmuller's need to preserve the orientation of the oriented coextruded protective layer prohibits Holzmuller from coextrusion coating the intermediate layer material and the oriented coextruded layer material to the aluminum layer. Thus, the process for manufacturing Holzmuller's intermediate layer material is fundamentally different than the process for forming Riis's .17 mil EAA layer and Riis's .65 mil LDPE layer, and Holzmuller's resulting two-layer coextruded intermediate layer materials are structurally and polymerically different than Riis's three-layer coextrusion of EAA, LDPE, and COC. Accordingly, a POSITA would have no reasonable expectation of success in modifying Riis's .65 mil LDPE layer to have the thickness ranges provided for Holzmuller's two-layer coextruded intermediate layer materials.

²⁷ Nothing in Holzmuller discloses, teaches, or suggests that modifying the thicknesses of the bonding layer would improve adhesion properties of the film.

G. Riis and Holzmuller fail to render obvious Claim 18.

1. Riis fails to teach or suggest a multi-layer tie layer having per-layer loading ranges "in the range of 7 to 20 g/m²."

The per-layer loading ranges, such as those recited in Claim 18, are not rendered obvious by Riis, in view of Wypcyh, Tohara, and Holzmuller, as alleged by Petitioner (*See* Opposition, 16–20).

In accordance with Petitioner's calculations, Riis's .17 mil EAA layer has a loading in the range of 3.97 to 4.15 g/m² and Riis's .65 mil LDPE layer has a larger loading in the range of 15.11 to 15.34 g/m². Petition, 41, 42.

Thus, even if the .17 mil EAA and .65 mil LDPE layers are interpreted as tie layers, or as layers of a multi-layer tie layer, as Petitioner alleges (*see* Petition, 38, 39), the .17 mil EAA layer (having a loading in the range of 3.97 to 4.15 g/m²) and the .65 mil LDPE layer (having a loading in the range of 15.11 to 15.34 g/m²) fail to disclose a first layer and a second layer each having loadings "in the range of 7 to 20 g/m²," as recited in Claim 18. Petitioner acknowledges the same.²⁸

Also, it would not be, nor does Petitioner allege in its Opposition that it would be, obvious for a POSITA to modify Riis, on its own, so that the thicknesses of the layers in the Film to teach or suggest the per-layer ranges in the Substitute Claims. *See* EX2016 ¶ 155. Indeed, given a POSITA's knowledge, a POSITA

²⁸ Opposition, 16, 19, 20.

would not modify Riis, on its own, so that the layers of Riis's Film meet the per-layer loading ranges of 7 to 20 g/m² during routine experimentation. *See id.*

That is, a POSITA would be discouraged from increasing the thickness of the .17 mil EAA layer during routine experimentation since increasing the thickness of the .17 mil EAA layer would be expected to hinder adhesion and the mechanical properties of the Film.²⁹ *See* EX2016 ¶ 156; EX2015, 75:10–20 (Dr. Spontak acknowledging that "the adhesive layer in any laminated . . . structure, for the purpose of adhesion, should be relatively thin"), 76:7–20 ("you want to . . . ensure that you're getting the . . . most use of the polymer *with as little polymer as possible*") (emphasis added); 79:24–81:7 ("if you start to make that . . . adhesive layer thicker and thicker, you might find that now the mechanical properties can be compromised"); EX1004 ¶ [0071] ("the tie layer thickness is usually kept to a minimum consistent with the desired effect"). That is, increasing the thickness of the .17 mil EAA layer would oppose both Riis's disclosure and a POSITA's desire, as stated by Petitioner, to "promote adhesion of layers and to prevent undesirable lamination." Opposition, 17. *See* EX2016 ¶ 156.

Accordingly, absent undue experimentation or an inventive step, a POSITA would not increase the .17 mil EAA tie layer thickness to arrive at the per-layer

²⁹ "A reference may be said to teach away when a person of ordinary skill, upon reading the reference . . . would be led in a direction divergent from the path that was taken by the applicant." *Polaris*, 1069.

loading ranges of "7 to 20 g/m²" recited in Claim 18. Nor has Petitioner asserted otherwise. Instead, Petitioner alleges that Holzmuller cures Riis's deficiencies. *See* Opposition, 16, 17.

2. Holzmuller fails to cure the deficiencies of Riis.

A POSITA would have no reasonable expectation of success in modifying Riis's .17 mil EAA layer and .65 mil LDPE layer to have the thickness ranges provided for Holzmuller's two-layer coextruded intermediate layer materials. *See* § III.F.2, *supra*.

H. Riis and Holzmuller fail to render obvious Claim 17.

1. Riis and Holzmuller fail to teach or suggest a multi-layer tie layer having "[a] first layer . . . adjacent to the base layer . . . [and a] second layer . . . adjacent to the first layer and [a] contact layer . . . wherein a loading of the first layer of the tie layer is in the range of 5 to 19 g/m² and a loading of the second layer of the tie layer is in the range of 1 to 14 g/m²."

For similar reasons as described above with reference to Claims 16 and 18, neither Riis, Holzmuller, nor any combination thereof, teaches the respective per-layer loading ranges of the "first layer of the tie layer" and the "second layer of the tie layer" recited in Claim 17.

I. Wypych, Tohara, and Rivers fail to cure the deficiencies of Riis and Holzmuller.

Wypych is relied on simply to provide material properties for the film disclosed in Riis. Petition, p. 80. Tohara is primarily relied on to allege chemical resistance to rivastigmine. Opposition, 14. Rivers is primarily relied on to allege

packaging products that exhibit minimal scalping. Thus, no singular or collective combination of Wypych, Tohara,³⁰ and Rivers cure the deficiencies of Riis regarding a tie layer that comprises multiple layers, let alone a multi-layer tie layer having the per-layer loading ranges in the Substitute Claims. Nor has Petitioner asserted otherwise.

IV. CONCLUSION

As such, Adapa requests that the Board grant Adapa's Revised Motion to Amend.

Respectfully submitted on January 16, 2024, by:

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³⁰ Additionally, a POSITA would not be motivated to combine Riis and Tohara, for reasons similar to those regarding Riis and Holzmuller. *See* EX2016 ¶¶ 159-165.

V. CLAIMS APPENDIX — MARKED

The proposed amended claims are shown in marked-up form below.

A. Proposed substitute claim 14 to replace claim 1, if claim 1 is found unpatentable.

14. A method for providing an aggressive chemical-resistant film, wherein the aggressive chemical-resistant film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine, said method comprising:

providing a base layer, wherein the base layer ~~comprises~~ consists of aluminum and is resistant to one or more of water or oxygen;

coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC);

coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer ~~comprising~~ consisting of the aluminum; and

allowing the coextrusion layer coated to the base layer to adhere to form the aggressive chemical-resistant film, wherein the aggressive chemical-resistant film consists of:

the base layer ~~comprising~~ consisting of the aluminum, and
the coextrusion layer consisting of the tie layer~~[[,]]~~ and the contact layer consisting of the COC, wherein:

the tie layer comprises ~~one or more layers~~ a first layer and a second layer, and wherein the tie layer, or each of the ~~one or more layers~~ first layer of the tie layer and the second layer of the tie layer, has a loading in the range of 7 to 20 g/m².

B. Proposed substitute claim 15 to replace claim 4, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 4 is found unpatentable.

15. The method according to claim ~~[[1]]~~ 14, wherein the contact layer has a loading in the range of 4 to 20 g/m².

C. Proposed substitute claim 16 to replace claim 5, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 5 is found unpatentable.

16. The method according to claim ~~[[1]]~~ 14, wherein a loading of an entirety of the tie layer is in the range of 7 to 20 g/m², and wherein a loading of the first layer of the tie layer is in the range of 1 to 14 g/m² and a loading of the second layer of the tie layer is in the range of 1 to 14 g/m².

D. Proposed substitute claim 17 to replace claim 6, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 6 is found unpatentable.

17. ~~[[A]]~~ The method according to claim ~~[[1]]~~ 14, wherein a loading of ~~at least a portion of~~ the entirety of the tie layer is in the range of 7 to 20 g/m², wherein the first layer of the tie layer is adjacent to the base layer, wherein the second layer of the tie layer is adjacent to the first layer and the contact layer, and wherein a loading of the first layer of the tie layer is in the range of 5 to 19 g/m² and a loading of the second layer of the tie layer is in the range of 1 to 14 g/m².

E. Proposed substitute claim 18 to replace claim 7, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 7 is found unpatentable.

18. The method according to claim ~~[[1]]~~ 14, wherein ~~the one or more layers of the tie layer~~ comprises a plurality of layers consisting of the first layer of the tie layer and the second layer of the tie layer, ~~[[and]]~~ wherein a loading of the ~~plurality of layers~~ first layer of the tie layer is in the range of 7 to 20 g/m² and a loading of the second layer of the tie layer is in the range of 7 to 20 g/m².

F. Proposed substitute claim 19 to replace claim 8, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 8 is found unpatentable.

19. The method according to claim ~~[[1]]~~ 14, wherein:
~~the one or more layers of the tie layer~~ consists of two layers,
the aggressive chemical-resistant film is resistant to the chemical based at least in part on allowing less than 10% of the chemical to migrate into the aggressive chemical-resistant film.

G. Proposed substitute claim 20 to replace claim 9, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 9 is found unpatentable.

20. The method according to claim ~~[[1]]~~ 14, wherein coating the coextrusion layer to the base layer comprises performing a coextrusion coating.

H. Proposed substitute claim 21 to replace claim 10, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 10 is found unpatentable.

21. The method according to claim ~~[[1]]~~ 14, wherein at least one of the ~~one or more layers~~ first layer of the tie layer and the second layer of the tie layer comprises an acrylic acid layer or a polyethylene layer.

I. Proposed substitute claim 22 to replace claim 11, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 11 is found unpatentable.

22. The method according to claim ~~[[1]]~~ 14, wherein:
the ~~one or more layers~~ first layer of the tie layer and the second layer of the tie layer comprises an acrylic acid layer and a polyethylene layer,
the chemical is provided in a first patch, and
the aggressive chemical-resistant film is resistant to the chemical based at least in part on allowing 90% to 110% of the chemical in the first patch to migrate into a first pouch formed by the aggressive chemical-resistant film relative to an amount of the chemical in a second patch allowed to migrate into a second pouch formed by a second film comprising a contact layer that comprises polyacrylonitrile.

J. Proposed substitute claim 23 to replace claim 12, if (a) claims 1 and 11 are found unpatentable and replaced with substitute claims 14 and 22 and (b) claim 12 is found unpatentable.

23. The method according to claim ~~[[11]]~~ 22, wherein the acrylic acid layer comprises ethylene acrylic acid.

K. Proposed substitute claim 24 to replace claim 13, if claim 13 is found unpatentable.

24. A method for providing a laminate, wherein the laminate comprises an aggressive chemical-resistant film, said method comprising:

- providing a base layer, wherein the base layer ~~comprises~~ consists of aluminum and is resistant to one or more of water or oxygen;
- coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC);
- coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer ~~comprising~~ consisting of the aluminum; and
- allowing the coextrusion layer coated to the base layer to adhere to form the aggressive chemical-resistant film, wherein the aggressive chemical-resistant film consists of:
 - the base layer ~~comprising~~ consisting of the aluminum, and
 - the coextrusion layer consisting of the tie layer~~[[,]]~~ and the contact layer consisting of the COC, wherein:
 - the aggressive chemical-resistant film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine, and
 - [wherein] the tie layer comprises ~~one or more layers a~~ first layer and a second layer, and wherein the tie layer, or each of the ~~one or more layers~~ first layer of the tie layer and the second layer of the tie layer, has a loading in the range of 7 to 20 g/m².

VI. CLAIMS APPENDIX — CLEAN AND LABELED

These claims correspond to clean versions of the substitute claims set forth above.

The bracketed claim labels correspond to the claim labels in the table § II.B, *supra*.

A. Proposed substitute claim 14 to replace claim 1, if claim 1 is found unpatentable.

14. [14A] A method for providing an aggressive chemical-resistant film, wherein the aggressive chemical-resistant film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine, said method comprising:

[14B] providing a base layer, wherein the base layer consists of aluminum and is resistant to one or more of water or oxygen;

[14D] coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC);

[14D] coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer consisting of the aluminum; and

[14E] allowing the coextrusion layer coated to the base layer to adhere to form the aggressive chemical-resistant film, wherein the aggressive chemical-resistant film consists of:

the base layer consisting of the aluminum, and

the coextrusion layer consisting of the tie layer and the contact layer consisting of the COC, wherein:

[14F] the tie layer comprises a first layer and a second layer, and wherein the tie layer, or each of the first layer of the tie layer and the second layer of the tie layer, has a loading in the range of 7 to 20 g/m².

B. Proposed substitute claim 15 to replace claim 4, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 4 is found unpatentable.

15. [15A] The method according to claim 14, wherein the contact layer has a loading in the range of 4 to 20 g/m².

C. Proposed substitute claim 16 to replace claim 5, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 5 is found unpatentable.

16. [16A] The method according to claim 14, wherein a loading of an entirety of the tie layer is in the range of 7 to 20 g/m², and wherein a loading of the first layer of the tie layer is in the range of 1 to 14 g/m² and a loading of the second layer of the tie layer is in the range of 1 to 14 g/m².

D. Proposed substitute claim 17 to replace claim 6, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 6 is found unpatentable.

17. [17A] The method according to claim 14, wherein a loading of the entirety of the tie layer is in the range of 7 to 20 g/m², wherein the first layer of the tie layer is adjacent to the base layer, wherein the second layer of the tie layer is adjacent to the first layer and the contact layer, and wherein a loading of the first layer of the tie layer is in the range of 5 to 19 g/m² and a loading of the second layer of the tie layer is in the range of 1 to 14 g/m².

E. Proposed substitute claim 18 to replace claim 7, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 7 is found unpatentable.

18. [18A] The method according to claim 14, wherein the tie layer comprises a plurality of layers consisting of the first layer of the tie layer and the second layer of the tie layer, wherein a loading of the first layer of the tie layer is in the range of 7 to 20 g/m² and a loading of the second layer of the tie layer is in the range of 7 to 20 g/m².

F. Proposed substitute claim 19 to replace claim 8, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 8 is found unpatentable.

19. [19A] The method according to claim 14, wherein:
[19B] the tie layer consists of two layers,
[19C] the aggressive chemical-resistant film is resistant to the chemical based at least in part on allowing less than 10% of the chemical to migrate into the aggressive chemical-resistant film.

G. Proposed substitute claim 20 to replace claim 9, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 9 is found unpatentable.

20. [20A] The method according to claim 14, wherein coating the coextrusion layer to the base layer comprises performing a coextrusion coating.

H. Proposed substitute claim 21 to replace claim 10, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 10 is found unpatentable.

21. [21A] The method according to claim 14, wherein at least one of the first layer of the tie layer and the second layer of the tie layer comprises an acrylic acid layer or a polyethylene layer.

I. Proposed substitute claim 22 to replace claim 11, if (a) claim 1 is found unpatentable and replaced with substitute claim 14 and (b) claim 11 is found unpatentable.

22. [22A] The method according to claim 14, wherein:
[22B] the first layer of the tie layer and the second layer of the tie layer comprises an acrylic acid layer and a polyethylene layer,
[22C] the chemical is provided in a first patch, and
[22D] the aggressive chemical-resistant film is resistant to the chemical based at least in part on allowing 90% to 110% of the chemical in the first patch to migrate into a first pouch formed by the aggressive chemical-resistant film relative to an amount of the chemical in a second patch allowed to migrate into a second pouch formed by a second film comprising a contact layer that comprises polyacrylonitrile.

J. Proposed substitute claim 23 to replace claim 12, if (a) claims 1 and 11 are found unpatentable and replaced with substitute claims 14 and 22 and (b) claim 12 is found unpatentable.

23. [23A] The method according to claim 22, wherein the acrylic acid layer comprises ethylene acrylic acid.

K. Proposed substitute claim 24 to replace claim 13, if claim 13 is found unpatentable.

24. [24A] A method for providing a laminate, wherein the laminate comprises an aggressive chemical-resistant film, said method comprising:

[24B] providing a base layer, wherein the base layer consists of aluminum and is resistant to one or more of water or oxygen;

[24C] coextruding a tie layer and a contact layer to provide a coextrusion layer, wherein the contact layer consists of a cycloolefin copolymer (COC);

[24D] coating the coextrusion layer consisting of the tie layer and the COC of the contact layer directly to the base layer consisting of the aluminum; and

[24E] allowing the coextrusion layer coated to the base layer to adhere to form the aggressive chemical-resistant film, wherein the aggressive chemical-resistant film consists of:

the base layer consisting of the aluminum, and

the coextrusion layer consisting of the tie layer and the contact layer consisting of the COC, wherein:

[24F] the aggressive chemical-resistant film is resistant to a chemical selected from nicotine, fentanyl, rivastigmine, or lidocaine, and

[24G] the tie layer comprises a first layer and a second layer, and wherein the tie layer, or each of the first layer of the tie layer and the second layer of the tie layer, has a loading in the range of 7 to 20 g/m².

CERTIFICATE OF SERVICE

I, Steven A. Avena, hereby certify that a copy of the foregoing **PATENT OWNER'S REVISED MOTION TO AMEND** has been served on the attorneys of record of Petitioner Huhtamaki Flexible Packaging Germany GmbH & Co. KG electronically by email as of today, January 16, 2024, at the following electronic addresses:

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Respectfully submitted on January 16, 2024, by:

/Steven Avena/

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