

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MULTI-COLOR CORPORATION
Petitioner

v.

BROOK & WHITTLE LIMITED
Patent Owner

PGR2025-00025
Patent No. 11,961,422

PATENT OWNER'S PRELIMINARY RESPONSE

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LISTING OF EXHIBITS

EX	DESCRIPTION
2001	"Going for Gold," Multi-Color Corporation, available at https://www.mcclabel.com/en/resources/going-for-gold
2002	"NESCAFÉ® Debuts Gold Espresso and Ice Roast Instant Coffee in the U.S., Offering Rich Variety for Every Occasion," Nestle, April 3, 2024, available at https://www.nestleusa.com/media/pressreleases/gold-espresso-ice-instant-coffee
2003	recycLABEL™ Shrink Sleeve brochure, Multi-Color Corporation
2004	"Labeled with Care – Sustainability Update," Multi-Color Corporation, available at https://issuu.com/mcclabel/docs/mcc_2024_sustainability_update?fr=sOTFjMjY0MTE4OTQ
2005	"Nestlé to use recyclable, light-blocking shrink sleeves on some beverage products," Packaging Dive, April 17, 2024, available at https://www.packagingdive.com/news/nestle-recyclable-shrink-sleeve-label-light-blocking/713427/
2006	<i>Brook + Whittle LTD v. Nestle USA, Inc. et al.</i> , 2:24-cv-00735-JRG-RSP, Docket Report, generated May 13, 2025
2007	<i>Brook + Whittle LTD v. Nestle USA, Inc. et al.</i> , 2:24-cv-00735-JRG-RSP, D.I. 16 (Docket Control Order)
2008	<i>Brook + Whittle LTD v. Nestle USA, Inc. et al.</i> , 2:24-cv-00735-JRG-RSP, D.I. 50 (Defendants' Unopposed Motion for Leave to Supplement Invalidity Contentions Under P.R. 3-6(b))
2009	<i>Brook + Whittle LTD v. Nestle USA, Inc. et al.</i> , 2:24-cv-00735-JRG-RSP, D.I. 51 (Order granting D.I. 50)

Pursuant to 37 C.F.R. § 42.107(a), Patent Owner Brook + Whittle Limited (“Patent Owner”) submits this Preliminary Response in response to the Petition for Post Grant Review (“PGR”) of U.S. Patent No. 11,961,422 (“the ’422 Patent”) filed by Multi-Color Corporation (“Petitioner”).

I. INTRODUCTION AND SUMMARY OF ARGUMENT

The Petition includes four grounds of purported unpatentability challenging all claims of the ’422 Patent. Each ground falls far short of demonstrating “that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” 35 U.S.C. § 324(a); *see also* 37 C.F.R. § 42.208. Petitioner ignores the clear and unambiguous disavowal of claim scope of an unquestionably material term to all claims: “recyclable.” The first three grounds are undercut by Petitioner’s inexplicable decision to not include sufficient evidence that its *own* Gatorade bottle would either anticipate or render obvious in combination with either the knowledge of a person of ordinary skill in the art (“POSITA”) or—again—its *own* Febreze bottle. The final ground includes a cursory challenge of indefiniteness that is substantially hindered by Petitioner’s failure to construe the term “recyclable” in light of the prosecution history disclaimer. As Petitioner’s grounds are meritless, Patent Owner respectfully requests that the Board deny institution of the Petition.

II. BACKGROUND

A. Technology Overview and the '422 Patent

The '422 Patent is directed to a recyclable shrink label with a light blocking layer to block at least 80% of incident light with wavelengths between 200 nm and 900 nm in which the label is recyclable along with a container. EX1001 at Abstract. The '422 Patent recognizes that “[t]he dairy, food, nutraceutical, and other markets also require light protective packaging to block ingredient harmful light waves from impacting the shelf life and performance of those products.” EX1001 at 1:16-20. Moreover, according to the '422 Patent, “[t]he consumer packaged-goods markets globally aspire to utilize recyclable packaging for most products.” EX1001 at 1:14-15. While “[c]lear PET packaging provides a cost effective recyclable option,” “[t]raditionally, color impregnated bottles or containers, and/or white shrink films printed with or sometimes without functional light blocking layers are used to block the harmful light waves.” EX1001 at 1:14-25. Color impregnated bottles or containers are not readily recyclable, however. EX1001 at 1:23-25. Therefore, the '422 Patent recognizes “there remains a need for recyclable, light protective packaging options for many markets, including the food and nutraceutical markets.” EX1001 at 1:26-28.

The '422 Patent accordingly discloses a variety of exemplary embodiments aimed at providing a recyclable, light blocking, heat shrink label that can be

embellished with various layers, such as an indicia layer to convey a message (*e.g.*, characteristics of a product in a package, the quantity of a product in a package, or other messages), and a high opacity layer to block light from interacting with the contents of the container. EX1001 at 1:36-3:3, 5:4-43, Figs. 1A-1E, 2. The labels claimed by the '422 Patent “may cover at least some clear or transparent parts of a package,” and “serve to block light from reaching a product inside the package.” EX1001 at 6:23-29, Fig. 2.

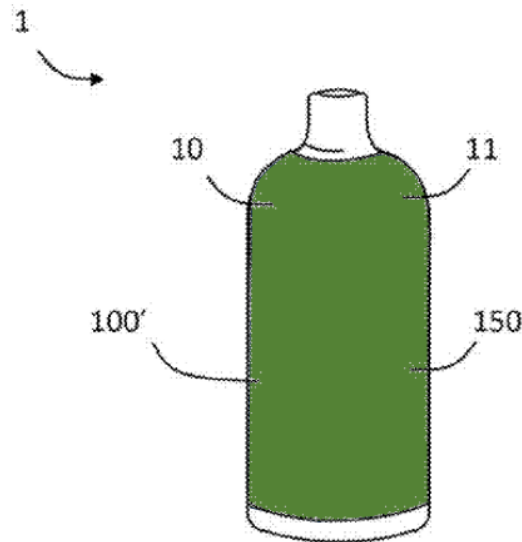


Fig. 2

EX1001 at Fig. 2 (annotated)

The '422 Patent describes the various layers comprising a heat shrink, light blocking label. For example, the heat shrink label can be composed of a polyester heat shrink film as is used in the packaging industry. EX1001 at 7:38-43. When heated, the shrink label can shrink anywhere from 1% up to 50% or more in order

for the label to conform to the container. EX1001 at 8:15-37. The heat shrink film can then have layers added to it that may contain pigments, fillers, stabilizers, light protective agents, or other suitable modifying agents. EX1001 at 9:50-54.

The '422 Patent also describes multiple layers that can be added to the heat shrink film. For example, a high opacity layer can be added, which may be useful to add to a clear shrink film. EX1001 at 11:55-64. High opacity layers may contain white pigments such as titanium dioxide. EX1001 at 11:65-12:5.

In addition to the high opacity layer, the '422 Patent also describes the use of a light blocking layer to prevent light from interacting with the contents of the container. The light blocking layer described by the '422 Patent may include one or more light blocking components, including one or more metals such as aluminum. EX1001 at 13:48-63. The light blocking component can be a particulate material, characterized by a particle size diameter of between 0.1 μm to 100 μm .

In addition, heat shrink labels claimed by the '422 Patent can also include an indicia layer applied to the shrink film to form a graphics layer, including printed messages and/or pictorial designs. EX1001 at 15:54-59, 16:49-53.

The labels claimed by the '422 Patent are applied to an article (*e.g.*, a bottle or other container). EX1001 at 17:24-26. Figures 1A-1E illustrate various embodiments in which the layers of the heat shrink label can be employed in different configurations depending on the desired characteristics. For example, in

Figure 1A, the heat shrink label includes a heat shrink film 120, upon which indicia layer 125 (*e.g.*, graphics) is disposed on one surface thereof and an opposing surface includes a high opacity layer 110 and a light blocking layer 115 on the high opacity layer 110, such that the light blocking layer 115 is the closest to the article that the heat shrink label 100 is applied to.

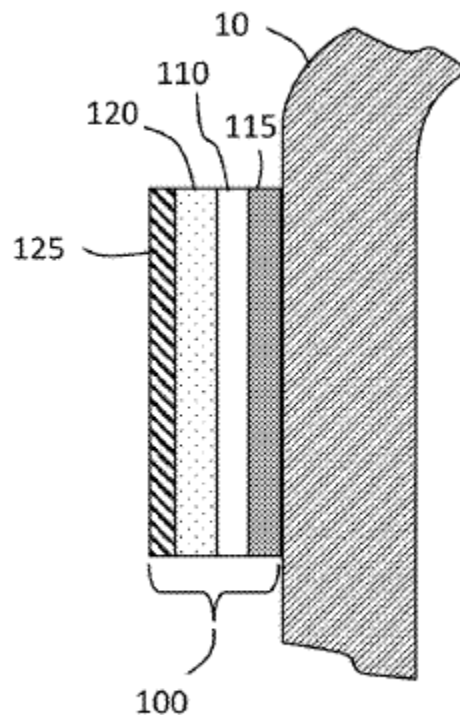
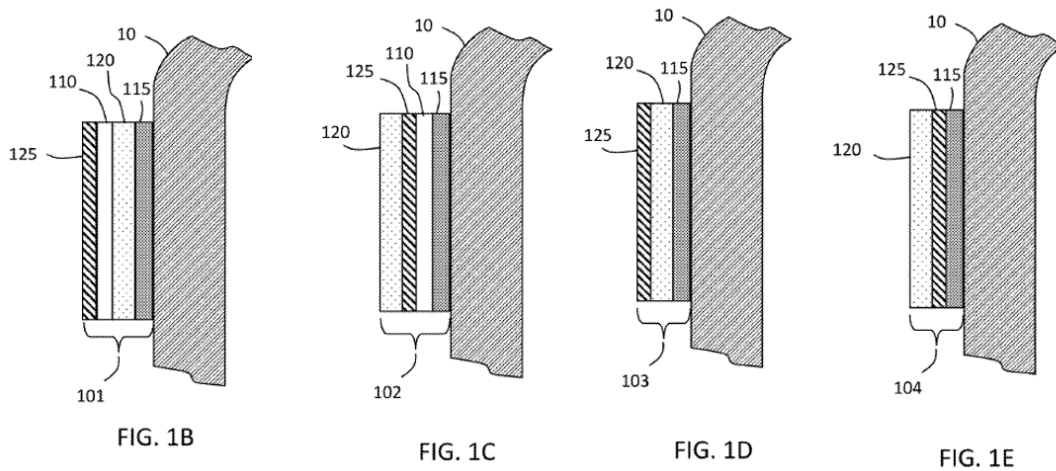


FIG. 1A

EX1001 Fig. 1A

In other embodiments, the layers can be applied in different orders, depending on the needs of the label. Figures 1B-1E depict alternative embodiments where the various layers are applied in alternative orders.



EX1001 at Figs. 1B-1E

An important aspect of the '422 Patent is that the claimed labels are recyclable along with the containers to which the label is fixed. For example, in some embodiments, the article or container may be made of the same or similar polymer as the label (*e.g.*, PET) such that both the container and label can be recycled together. EX1001 at 18:25-30. The '422 Patent explains what is meant by the claimed “shrink label is recyclable with a PET container.” EX1001 at claim 1. For example, the Abstract for the '422 Patent states “Articles including the recyclable shrink label may be recycled in a process where both the container and the label are recognized as a resin and may be directed into a corresponding recycling stream. In some cases, both the container and the label include PET.” EX1001 at Abs.

B. Prosecution History of the '422 Patent

The '422 Patent issued from U.S. Patent Application No. 18/103,234 (the “'234 Application”), filed on January 30, 2023. EX1001 at Cover. The '234

Application is a continuation of Application No. PCT/US2022/029280, which was filed on May 13, 2022, and claims priority to Provisional Application No. 63/188,794, filed on May 14, 2021. EX1001 at Cover.

The '234 Application was originally filed with 4 independent claims—claim 1 reciting a “recyclable shrink label,” claim 16 reciting “[a]n article” comprising a container and shrink label, claim 20 reciting “[a] method of making a label for a container,” and claim 21 reciting “[a] method of recycling an article.” EX1002 at 11-12. Concurrently with the initial application, Applicant submitted an Information Disclosure Statement (“IDS”) listing several guidance documents from the Association of Plastic Recyclers (“APR”) including: Shrink Sleeve Labels on PET Containers APR Resource Document (1/4/2021) (the “APR Resource Document”); Critical Guidance Protocol for Clear PET Articles with Labels and Closures (8/17/2021) (the “APR Critical Guidance Protocol”); Evaluation of the Near Infrared (NIR) Sorting Potential of a Whole Plastic Article (5/15/2018) (“SORT-B-01”); and Evaluation of Sorting Potential for Plastic Articles Utilizing Metal, Metalized, or Metallic Printed Components (5/15/2018) (“SORT-B-03”) (collectively, “APR Guidance Documents”). EX1002 at 92-93. On June 8, 2023, the Examiner issued a Requirement for Restriction/Election, requiring Applicant to restrict the application to one of the following inventions: (1) claims 1-19, drawn to a recyclable shrink label, or (2) claims 20-21, drawn to a method of making a label

for a container. EX1002 at 207. Applicant elected Group 1 (claims 1-19), drawn to a recyclable shrink label (and article comprising the recyclable shrink label). EX1002 at 213.

On August 9, 2023, the Examiner rejected the elected claims under 35 U.S.C. § 112(b), as well as under § 103 over various prior art references, including U.S. Patent Application Publication 2017/0223879 (“Mitchell”). EX1002 at 224-228. Among other reasons, the Examiner noted that Mitchell teaches an “electromagnetic radiation blocking label arrangement and a container comprising the radiation blocking label arrangement thereon.” EX1002 at 228. The Examiner also noted that the “term ‘recyclable’ is considered functional language related to the intended use of the product and is accorded limited weight as the language does not further limit the structure.” EX1002 at 229. In light of this, the Examiner explained that Mitchell “teaches all the structural features of claim 1” and “would be capable of performing in the manner claimed” because it “teaches that the shrinkable labels provide easy separate during recycling processes.” EX1002 at 229. The Examiner also signed the January 30, 2023 IDS listing the APR Guidance Documents and noted that “ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH.” EX1002 at 218-219. None of the APR Guidance Documents were lined through. EX1002 at 218-219.

On October 16, 2023, Applicant amended both pending independent claims to add the limitations requiring “a heat shrink film comprising polyethylene terephthalate (PET)” and “wherein the recyclable shrink label is recyclable with a PET container.” EX1002 at 316. Applicant also amended several claims to remove certain limitations in order to traverse § 112 rejections.

In making its amendments to overcome the Examiner's rejections, Applicant explained that it disagreed with Examiner's assertion that “[t]he term recyclable is considered functional language related to the intended use of the product and is accorded limited weight as **the language does not further limit the structure or the process.**” EX1002 at 335 (internal quotes omitted) (emphasis in original). As Applicant explained, “[t]he term ‘recyclable’ does further limit the claim in that the claimed label **must be capable of being recycled**” and cautioning that “[n]ot all combinations of shrink films and light blocking materials are capable of being recycled.” EX1002 at 335 (emphasis in original). Applicant further explained: “It should also be noted that *removing the label before or during the recycling process is not evidence of the recyclability of the label.*” EX1002 at 335 (emphasis added).

Thus, Applicant distinguished the claimed invention over the Mitchell reference, which teaches that “it would be desirable that the labels are **removable** from the surface of the container but also **separable** in the normal sink-float washing process thus *promoting recycling of the container.*” EX1002 at 335 (emphasis in

original). In contrast to Mitchell, Applicant states that “removing the label before or during the recycling process is not evidence of the recyclability of the label” and “[i]f anything, the desire to provide a removable label implies that the label may not be recyclable and must be removed before the container itself can be recycled.” EX1002 at 335. According to the Applicant, “[r]emoving the label during the recycling process is not equivalent to actually recycling the label.” EX1002 at 335.

Applicant further distinguished the Mitchell reference by referring to the APR Resource Document:

APR recommends films that are compatible with PET recycling such as:

1. Films that float in water and that can be **separated from PET** that sinks in water, or,
2. **PET based films** that crystallize and **can be recovered *with the PET stream***.

EX1002 at 336 (emphasis in original); *see also* EX1002 at 323-332 (APR Resource Document). Applicant specifically distinguished the Mitchell reference stating it “does not fall into the second category [of the APR Resource Document] and is not recyclable ***with the PET stream***.” EX1002 at 336 (emphasis added).

On November 13, 2023, the Examiner issued a final rejection of the pending independent claims under §§ 102 and 103 over Japanese Patent No. 2009-214535A (“Sasaki”). Critically, the Examiner noted in her response to Applicant’s

amendments that “Applicant’s arguments with respect to claims 1-4, 6-16 and 23-26 have been considered but are moot because the new ground of rejection does not rely on any reference applied in the prior rejection of record for any teaching or matter specifically challenged in the argument.” EX1002 at 357.

On January 10, 2024, Applicant further amended the claims to include the limitation “wherein the light blocking component comprises a particulate having a particle size of 0.1 μm to 100 μm , wherein the particulate comprises metal, metal oxide, a reflective pigment, carbon black, mica, or a combination thereof.” EX1002 at 409. According to Applicant, the claim amendment included the subject matter of claim 12, which is not rejected under § 102 over Sasaki and is therefore patentable. EX1002 at 417.

On February 6, 2024, the Examiner issued a Notice of Allowance for all claims, noting that Applicant’s arguments have been fully considered and are persuasive. EX1002 at 435. The ’422 Patent accordingly issued on April 16, 2024. EX1001 at Cover.

III. CLAIM CONSTRUCTION

Terms of a claim subject to a post-grant review are “construed using the same claim construction standard that would be used to construe the claim in a civil action ..., including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the

prosecution history pertaining to the patent.” 37 C.F.R. §42.200(b). Claim terms must be read “not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). Here, Petitioner fails to provide a construction for a term that is unquestionably material to its Petition.

A. “recyclable” (claims 1-19)

Claim Term	Petitioner Construction	Patent Owner Construction
recyclable	none	capable of being recycled without removing the label from a container before or during the recycling process

Claims 1-19 recite the term “recyclable” in the context of a recyclable shrink label that is recyclable with a PET container. Claim construction begins with the words of the claim itself, and there is a “heavy presumption” that those words receive their ordinary and customary meaning. *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013). “[O]rdinary and customary” meaning is that understood by a person of ordinary skill in the art (“POSITA”) at the time of the invention in the context of the specification and prosecution history. *Phillips*, 415 F.3d at 1313. “The plain meaning of claim language ordinarily controls unless the patentee acts as his own lexicographer and provides a special definition for a particular claim term or the patentee disavows the ordinary scope of a claim term either in the specification or during prosecution.” *InterDigital Commc’ns, LLC v.*

Int'l Trade Comm'n, 690 F.3d 1318, 1324 (Fed. Cir. 2012). Prosecution history disclaimer requires that “the statement in the prosecution history must be clear and unambiguous, and constitute a clear disavowal of scope.” *Continental Circuits LLC v. Intel Corp.*, 915 F.3d 788, 798 (Fed. Cir. 2019).

Applicant added the claim language “wherein the recyclable shrink label is recyclable with a PET container” to the pending independent claims on October 16, 2023. EX1002 at 316. In the remarks accompanying amendment, Applicant clearly and unambiguously limited the scope of this claim term. Applicant stated, “[t]he term ‘recyclable’ does further limit the claim in that the claimed label **must be capable of being recycled**.” EX1002 at 335 (emphasis in original). Applicant explained:

Not all combinations of shrink films and light blocking materials are capable of being recycled, as further discussed below. It should also be noted that ***removing the label before or during the recycling process is not evidence of the recyclability of the label***. If anything, the desire to provide a removable label implies that the label may not be recyclable and must be removed before the container itself can be recycled. Removing the label during the recycling process is not equivalent to actually recycling the label.

EX1002 at 335 (emphasis added). Applicant unmistakably disavowed any claim scope of “recyclable” that requires “removing the label before or during the recycling process.”

Thus, the proper construction of the term “recyclable,” in view of the clear and unmistakable prosecution history disclaimer, is “capable of being recycled without removing the label from a container before or during the recycling process.”

IV. PETITIONER CANNOT SHOW IT IS MORE LIKELY THAN NOT THAT AT LEAST ONE CLAIM OF THE '422 PATENT IS UNPATENTABLE BECAUSE THE PETITION IS DEFICIENT WITH RESPECT TO AT LEAST ONE ELEMENT OF INDEPENDENT CLAIM 1 FOR EACH GROUND

Ground	Claims	Basis
1	1-3, 5-19	§102 – Gatorade Label
2	4	§103 – Gatorade Label and Knowledge of a POSITA, including Mitchell et al. (US 2017/0223879)
3	4	§103 – Gatorade Label in view of the Febreze Label
4	1-19	§112 – Indefinite re “wherein the recyclable shrink label is recyclable.”

For “a post-grant review to be instituted ... the information presented in the petition filed under section 321” must “demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” 35 U.S.C. § 324(a); *see also* 37 C.F.R. §42.208. This standard is higher than the “reasonable likelihood” that the Petition will prevail standard used in *inter partes* review. *Tinnus Enter., LLC v. Telebrands Corp.*, 733 F. App’x 1011, 1016 (Fed. Cir. 2018). Here, Petitioner has failed to meet this burden for any of its asserted grounds.

A. Ground 1: The Gatorade Label does not anticipate the claims of the '422 Patent under 35 U.S.C. §102

Despite the fact that all of Petitioner's arguments in Ground 1 rely on the Gatorade Label as the sole reference for independent claims 1 and 19, Petitioner fails to allege or provide sufficient evidence that the *Gatorade* Label alone meets the requirements of the independent claims. The purported evidence on which Petitioner relies is, at best, vague and unclear. For example, references to sample 3191115 appears to reference the *Febreze* Label. *See, e.g.*, Pet. at 17 (Fig. 4). The only samples specifically identifying a region of the Gatorade label from which they were selected are samples 3191157 and 3191168. *See, e.g.*, Pet. at 18 (Fig. 4 continued). Sample 3191170 appears to be a Gatorade Label, but no specific regions from which a sample was tested are identified. *See* EX1014 at Fig. 1. Samples 3191169, 3191158, 3191168, and 3191171 *may* be associated with the Gatorade Label but are not clearly labelled. *See* Pet. at 34, 35, 36, 39.

As such, any references to samples collected from the *Febreze* Label do not show how the *Gatorade* Label anticipates any claims of the '422 Patent.

1. Claim 1

- a. "wherein the light blocking component comprises a particulate having a particle size of 0.1 μm to 100 μm , wherein the particulate comprises metal, metal oxide, a reflective pigment, carbon black, mica, or a combination thereof..."

To demonstrate that the Gatorade Label meets this requirement, Petitioner relies on Figures 5 and 6. Petition at 30 (citing EX1014 ¶ 70; Images 5 and 6). Figure 5a references sample 3191115, Figure 5b references sample 3191157, Figure 5c references sample 3191167 and Figure 5d references 3191176. *See, e.g.*, Pet. at Figs. 5a-d. The images in Figure 6 evaluate the same samples. *See, e.g.*, Pet. at Figs. 6a-d. Of these samples, only sample 3191157 appears to be associated with the Gatorade Label. *See, e.g.*, Pet. at 18. Therefore analysis of any other sample is irrelevant to the anticipation analysis.

Petitioner refers to aluminum flakes in the ink as “light blocking component” and references the thickness of the ink layer as the particle size. *See* Pet. at 30 (“As can be seen in Figure 5, the aluminum flakes have a thickness larger than 0.1 μm and less than 100 μm . EX1014 ¶ 70; Images 5 and 6.”). Figure 5b, referencing sample 3191157 is shown below:

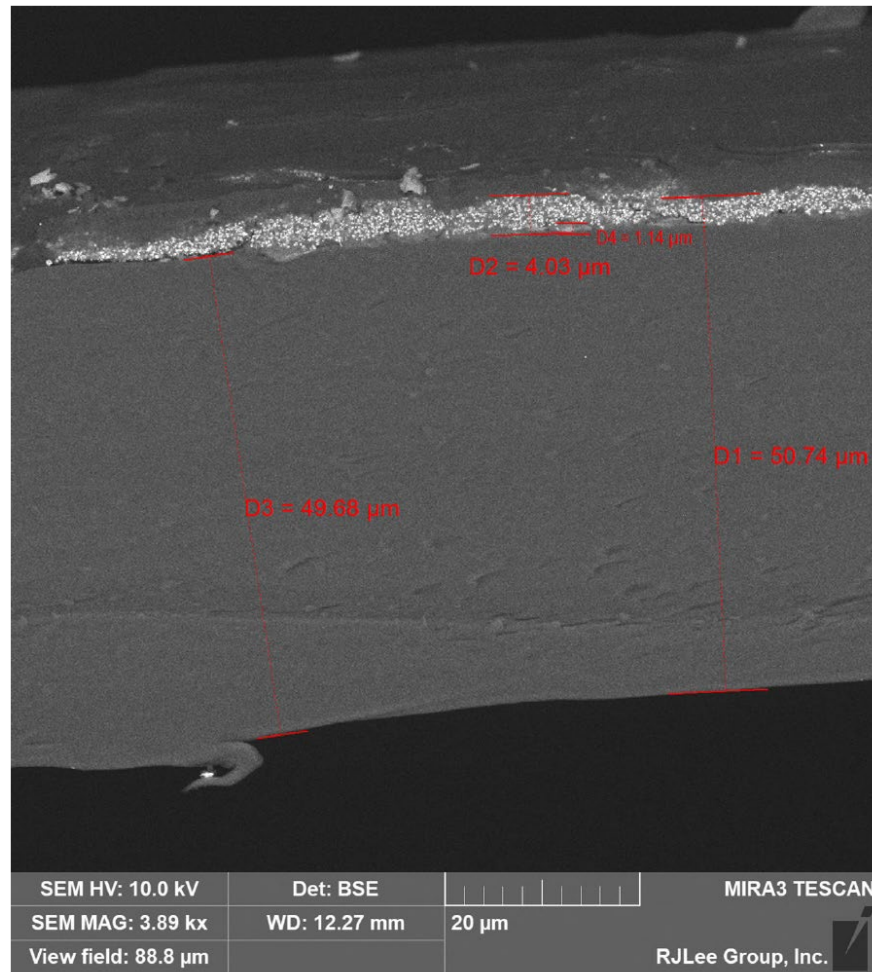


Figure 5b. SEM image of 3191157 cross section.

Pet. at 19 (Fig. 5b)

Petitioner's identification of a film created by the aluminum flakes is insufficient to anticipate "particulates." The '422 Patent differentiates between *flakes* and *particulates*. The specification describes "metal flakes" as part of the "ink":

As used herein, the term "metallic ink" refers to an ink to which *metal flakes or powder are added as a pigment additive to the ink*. Metallic inks when printed can appear to be reflective or shiny. Therefore, "non-

metallic ink” herein referred to inks without such metal flakes or powder components.

EX1001 at 4:62-67 (emphasis added). In contrast, the specification describes that the light blocking component is a “particulate matter” with a “particle size”:

According to an embodiment, the light blocking component is a ***particulate material***. The particles of the light blocking component may have a particle size of 0.1 μm or greater, 0.5 μm or greater, 1 μm or greater, 2 μm or greater, 3 μm or greater, 4 μm or greater, or 5 μm or greater. The particle size of the particles of the light blocking component may be 100 μm or smaller, 50 μm or smaller, 25 μm or smaller, 15 μm or smaller, 12 μm or smaller, 10 μm or smaller, 8 μm or smaller, 7 μm or smaller, or 6 μm or smaller. In some embodiments, the particle size of the light blocking component is in the range of 0.1 μm to 100 μm , 1 μm to 50 μm , or 2 μm to 25 μm . ***The particle size referred to here is an average particle size diameter measured by laser diffraction.***

EX1001 at 13:64-14:10 (emphasis added).

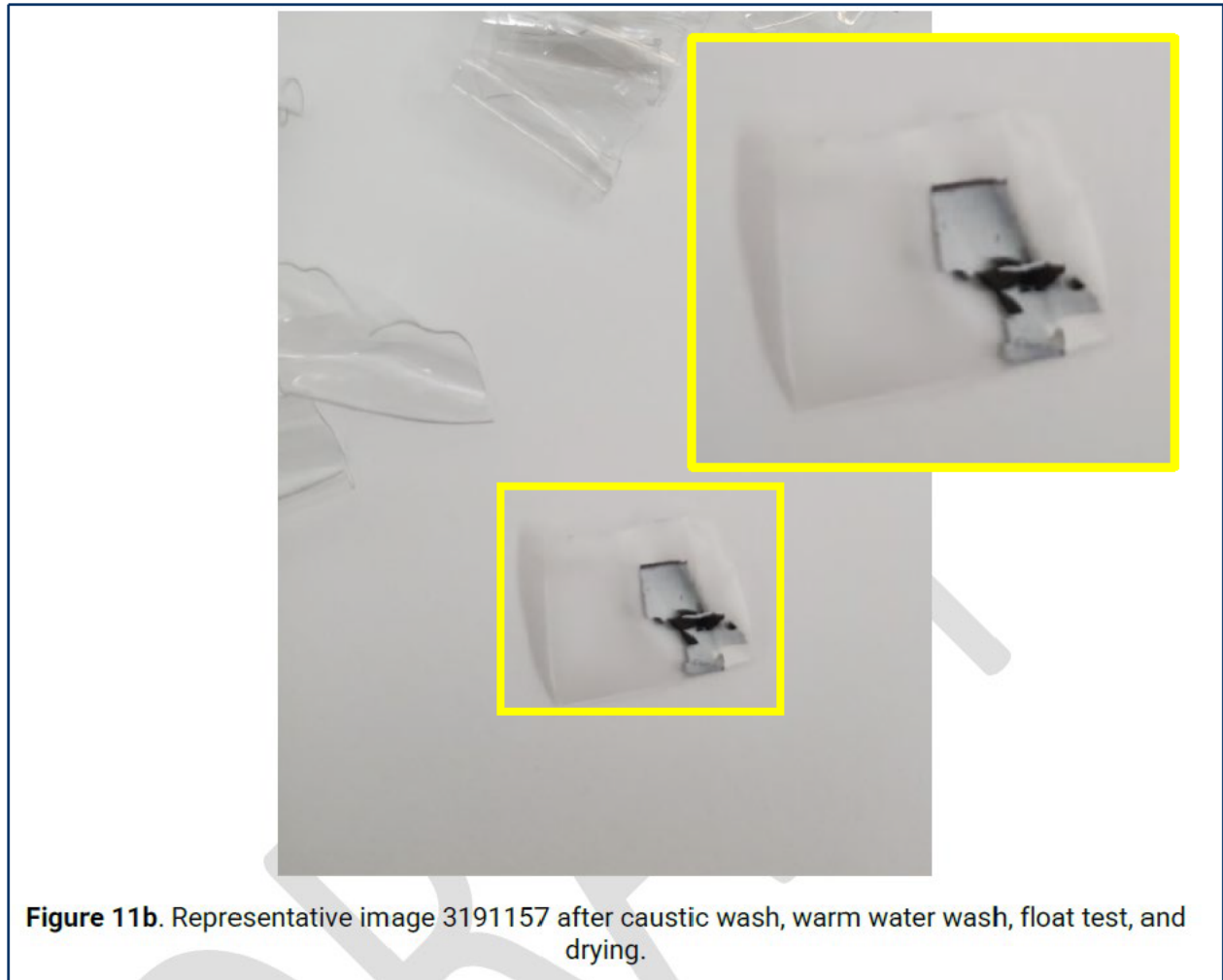
Although the claims require a particulate light blocking component (aluminum) with a particle size of 0.1 to 100 microns, Petitioner merely identifies, and measures the thickness of the ***film*** to show the ***particle size***. As the '422 Patent distinguishes particulate light-blocking components from light blocking films using metallic ink, Petitioner has not shown this claim element is met.

- b. “[w]herein the recyclable shrink label is recyclable with a PET container”

First, Petitioner concludes that this element may be met simply by demonstrating that “no inks are retained on the film after a caustic wash cycle typically used in PET reclaiming processes.” Pet. at 30 (citing EX1001 at 6:61). Yet, as explained above, “recyclable” does not merely require ink removal from a caustic wash cycle, but that the label is capable of being recycled without removing the label from a container before or during the recycling process. *See, supra*, Section III.A. Moreover, Petitioner ignores the full scope of the claim limitation, which requires not only that the recyclable shrink label is recyclable, but “recyclable *with* a PET container.” Petitioner has pointed to no evidence that the Gatorade Label can be recycled with the Gatorade bottle without removing the label before or during the recycling process.

Second, Petitioner points to Figures 11 and 12 of Dr. Deible's declaration to demonstrate that “ink is being removed during the caustic wash cycle.” Pet. at 30 (citing EX1014 ¶ 77; Images 11 and 12.). Yet Figure 11a references sample 3191115, Figure 11b references sample 3191157, Figure 11c references sample 3191167, and Figure 5d references 3191176. *See, e.g.*, EX1014 at Figs. 11a-d. Figure 12 only references sample 3191167. *See, e.g.*, EX1014 at Fig. 12 Of these samples, only sample 3191157 appears to be associated with the Gatorade Label. *See, e.g.*, Pet. at 18.

The images Petitioner shows for the Gatorade Label would not meet this claim limitation. As explained above, during prosecution, Applicant distinguished the Mitchell reference in connection with APR Resource Document. The APR Resource Document “recommends films that are compatible with PET recycling” providing two distinct options: (1) “Films that float in water and that can be **separated from PET** that sinks in water, or,” (2) “**PET based films** that crystallize and **can be recovered *with the PET stream***.” EX1002 at 336 (emphasis in original). Applicant explained that the Mitchell reference “film does not fall into the second category and is not recyclable with the PET stream.” EX1002 at 336. Although the label below may fall into the first category of the APR Resource Document, without removing the ink fully, it cannot fall into the second category wherein the label “can be recovered with the PET stream.”



EX1014 Fig. 11b with blowup of label flake used in Petitioner's recyclability testing

Compare EX1014 Figure 11b (showing ink retained on film after caustic wash), *with* EX1002 at 336 (Applicant limiting the claim scope to “PET based films that crystallize and can be recovered with the PET stream”) (emphasis omitted).

Petitioner also relies on Figures depicting a *Febreze* Label before and after a caustic wash and states that these figures depict that “the ink is being removed during

the caustic wash cycle.”¹ Pet. at 30. *Compare* EX1014 Figure 9 (Representative image of the shrink label mixed with PET flakes for the recyclability testing), *with* Figure 4 (showing Febreze Label). Yet, Petitioner makes no obviousness arguments to combine the Gatorade Label with the Febreze Label for the purposes of independent claims 1 and 19.



EX1014 Fig. 9 with blowup of label flake used in Petitioner's recyclability testing

¹ With respect to the independent claims 1 and 19, Petitioner relies solely on the Gatorade Label under § 102. While Grounds 2 and 3 rely on the Gatorade Label combined with the Febreze Label, none of Petitioner's grounds rely on the Febreze label as teaching or disclosing the requirement that “the recyclable shrink label is recyclable with a PET container” as required by claims 1 and 19.



EX1014 Fig. 4 (showing Febreze Label used in testing)

Moreover, even the images Petitioner shows for the Febreze Label would not meet this claim limitation because the ink is not fully removed during the caustic wash and therefore cannot be recycled with the PET stream. *Compare* EX1014 Figures 10, 11a (showing ink retained on film after caustic wash), *with* EX1002 at 336 (Applicant limiting the claim scope to “PET based films that crystallize and can be recovered with the PET stream”).



EX1014 Figs. 10 and 11a.

Petitioner does not even attempt to address why it chose to depict a Febreze Label as part of its analysis related to recyclability of the label with the container or why it would meet the limitation given the amount of ink retained on the flakes.

Third, Petitioner's statements regarding the Gatorade Label as an SKC Ecolabel™ sleeve label do not cure these deficiencies. Petitioner states that "[i]n connection with this analysis, Petitioner notes that the Gatorade Label is an SKC Ecolabel™ sleeve label," which Petitioner alleges meets or exceeds the APR's Critical Guidance Protocol for Clear PET Articles with Labels and Closures Document requirements. Petition at 31 (citing EX1016). Petitioner fails to acknowledge, however, that EX1018 explicitly states that the APR "recognition *applies only* to the Fort Dearborn Recycle Friendly *washable inking system and not necessarily to labeled bottles as those packages would need to be tested themselves* to demonstrate the system of resin, adjuvants, labels, and closures conformed to the

APR Critical Guidance Document and APR Design Guide.” EX1018 (emphasis added). Thus, the APR's recognition of the SKC Ecolabel says nothing about the recyclability of the Gatorade Label (or the Febreze Label) once printed with ink layers.

Fourth, Petitioner states that “the silver ink used in connection with the Gatorade Label is supplied by Watson Standard,” which “confirms that the silver ink passes recyclability/bleed testing set forth in the protocol established by the Association of Postconsumer of Plastic Recyclers.” Petition at 31 (citing EX1019). Neither Petitioner nor EX1019 explain what the standard for passing “recyclability/bleed testing” entails but regardless, recyclability of the ink, taken alone, also says nothing about whether the Gatorade Label is recyclable with the bottle for the same reasons explained above with respect to the APR's recognition of the SKC Ecolabel.

2. Claims 12 and 13 (“wherein the light blocking layer is present in” specified amounts)

Claim 12 requires “the light blocking layer is present in an amount of 0.5 ppr to 25 ppr *relative to the recyclable shrink label*” and claim 13 requires “the light blocking layer comprises from 0.1 ppr to 10 ppr *of the light blocking component*.” EX1001 at 29:4-9 (emphasis added). To calculate the relative ppr, or “pounds per ream,” EX1001 at 5:44, Petitioner makes conclusory assertions about the weight of the light-blocking layer.

Dr. Deible makes baseless assumptions that the aluminum content is roughly 10% of the layer. *See* EX1014 ¶ 93 (“The light blocking layer comprises other solid components along with the aluminum flakes. To compensate for the additional solids, an estimate of 10% of the mass of aluminum was included in the calculation of ppr for the light blocking layer.”). As there is no analysis to support Dr. Deible’s assumption that aluminum accounts for 10% of the solid weight, Petitioner has failed to prove the Gatorade Label meets these limitations.

3. Claim 19

- a. “a light blocking layer disposed adjacent the first surface and comprising a light blocking component”

Petitioner fails to demonstrate the Gatorade Label practices this limitation for the same reasons as described with respect to claim 1. *See supra* Section IV.A.1.a.

- b. “wherein the recyclable shrink label is recyclable with a PET container.”

Petitioner fails to demonstrate the Gatorade Label practices this limitation for the same reasons as described with respect to claim 1. *See supra* Section IV.A.1.b.

B. Ground 2: The Gatorade Label and Knowledge of a POSITA do not render obvious the claims of the '422 Patent under 35 U.S.C. §103

- 1. Claim 4: “wherein the recyclable shrink label comprises an indicia layer and wherein the high opacity layer is disposed between the indicia layer and the light blocking layer.”

As an initial matter, claim 4 depends from claim 1. For all of the reasons explained in Ground 1, Petitioner has failed to demonstrate that claim 4 is obvious

in light of the Gatorade Label and knowledge of a POSITA, because none of the issues identified in Ground 1 have been addressed or resolved by Petitioner's Ground 2.

Petitioner does not provide sufficient motivation to combine the Gatorade Label with knowledge of a POSITA represented by Mitchell et al. (US 2017/0223879). While Petitioner describes general motivation to combine embodiments of recyclable packaging (Pet. at 44, 45), light blocking layers (Pet. at 44-45), and the general goal of "promoting visibility" (Pet. at 45), Petitioner has not shown that a POSITA would have been motivated to combine the specific teachings of Mitchell into the Gatorade Label.

Petitioner's characterization of the Mitchell and Gatorade Label combination requiring "a very minor modification" where "no additional structures need to be added or removed from the Gatorade Label," *see* Pet. at 43. Petitioner further suggests that "a POSITA would have been prompted to modify the Gatorade Label" with a "reasonable expectation of success." Pet. at 46. Yet the Gatorade Label appears to be specifically designed to include metallic elements for aesthetic purposes; changing the order of the layers to include the high opacity layer on top of the metallic light-blocking layer would obscure the metallic ink:



Pet. at 6.

Furthermore, Petitioner provides no explanation on whether the container disclosed in Mitchell is PET such that the label may be recycled with the container in a PET stream, thus committing a significant failure of proof that this claim element is met.

C. Ground 3: The Gatorade Label and Febreze Label do not render obvious the claims of the '422 Patent under 35 U.S.C. §103

1. Claim 4: “wherein the recyclable shrink label comprises an indicia layer and wherein the high opacity layer is disposed between the indicia layer and the light blocking layer.”

As an initial matter, claim 4 depends from claim 1. For all of the reasons explained in Ground 1, Petitioner has failed to demonstrate that claim 4 is obviousness in light of the Gatorade Label and Knowledge of a POSITA, because

none of the issues identified in Ground 1 have been addressed or resolved by Petitioner's Ground 2.

Petitioner provides substantially similar grounds to combine and expectation of success for the Gatorade Label with the Febreze Label as the Gatorade Label with knowledge of a POSITA. *See supra*, Section IV.B.1.

Yet again, Petitioner describes general motivation to combine embodiments of recyclable packaging (Pet. at 50), light blocking layers (Pet. at 50-51), and the general goal of “promoting visibility” (Pet. at 45), Petitioner has not shown that a POSITA would have been motivated to combine the specific teachings of the Febreze Label into the Gatorade Label.

Petitioner describes that the Gatorade Label and Febreze Labels are “similar in purpose, composition, and structure.” Pet. at 52. Yet Petitioner provides no analysis for why a *food product* such as Gatorade would have a label with the same “purpose, composition, and structure” as an *air freshener* such as Febreze. Indeed, the '422 Patent itself explains '422 Patent recognizes “there remains a need for recyclable, light protective packaging options for many markets, including the *food and nutraceutical markets*.” EX1001 at 1:26-28. Petitioner does not even attempt to explain how the “purpose, composition, and structure” is the same between the Gatorade and Febreze Labels.

Petitioner again suggests that “a POSITA would have been prompted to modify the Gatorade Label” with a “reasonable expectation of success.” Pet. at 46. Yet the Gatorade Label appears to be specifically designed to include metallic elements for aesthetic purposes; changing the order to include the high opacity layer on top of the metallic light-blocking layer would obscure the metallic ink:



Pet. at 6.

Furthermore, Petitioner has not shown that the Febreze Label is affixed to a PET container such that the recyclable label could be recycled with a PET stream. *See* Pet. at 7, 33; EX1004. Petitioner has not shown that the Febreze Label is affixed

to a PET container whatsoever,² let alone that it is capable of being recycled without being removed from said PET container.

D. Ground 4: The Claims of the '422 Patent are Definite under 35 U.S.C. § 112

Petitioner contends that claims 1-19 are indefinite because the term “wherein the recyclable shrink label is recyclable” purportedly fails to inform a POSITA of the claim scope with reasonable certainty. Pet. at 53-54. That contention is legally and factually unsupported. To determine whether a claim is definite, “a patent’s claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). When the claim language is read in light of the intrinsic record—including the prosecution history—a POSITA would have readily understood the scope of the challenged term.

As explained above, the Patent Owner clearly and unambiguously disavowed any claim scope of “recyclable” that requires removing the label before or during the recycling process. *See supra* III.A. In light of this unmistakable prosecution history disclaimer, Patent Owner proposes construing the term “recyclable” to mean

² Patent Owner is not aware of any Febreze bottle that is pure PET such that it would meet the claims.

“capable of being recycled without removing the label from a container before or during the recycling process.” *See supra* III.A.

Yet, regardless of this construction, the surrounding claim language and prosecution history inform a POSITA of the scope of the claimed invention. The surrounding claim language provides context for the disputed claim term. The full limitation claims “wherein the recyclable shrink label is ***recyclable with a PET container***.” EX1001 at 28:36-37, 30:18-19 (emphasis added). Moreover, the claims require that the “recyclable shrink label” comprises “a heat shrink film comprising polyethylene terephthalate (PET).” EX1001 at 28:22-23, 30:8-9. This requirement that the label comprising PET film be recyclable ***with*** a PET container is supported in the prosecution history.

During prosecution, Applicant overcame a § 103 rejection stating that “[t]he shrink labels taught by Mitchell ’879 are not made of PET and would not be ***recyclable with*** a PET container,” because “[l]abels made of other materials, including polypropylene, polyethylene, and paper, are considered contaminants in a PET recycling stream and ***need to be removed*** for the PET container to be recycled.” EX1002 at 336 (emphasis added). Applicant further explained that Shrink Sleeve Labels on PET Containers APR Resource Document (*see* EX1002 at 323-332) states:

APR recommends films that are compatible with PET recycling such as:

1. Films that float in water and that can be **separated from PET** that sinks in water, or,
2. **PET based films** that crystallize and **can be recovered *with the PET stream***.

EX1002 at 336 (emphasis in original) (quoting EX1002 at 324). Applicant distinguished the Mitchell reference stating it “does not fall into the second category [of the APR Resource Document] and is not recyclable *with the PET stream*.” EX1002 at 336. Thus, Applicant informed a POSITA that the claimed invention was limited to “PET based films that crystallize and can be recovered with the PET stream,” and did not include films that must be separated from PET during the recycling process.

This understanding of the term “recyclable” is also supported by the specification. To ensure that a label is capable of being recycled with the PET stream without removal from the PET container before or during the recycling process, any ink on the label should wash off the film after a caustic wash. The specification of the '422 Patent provides that “[g]enerally clear crystallizable heat shrink films (e.g., PET shrink films) are considered recyclable if *no inks are retained on the film* after a caustic wash cycle typically used in PET reclaiming processes.” EX1001 at 6:62:65 (emphasis added). Further, “the labels of the present disclosure allow the use of a clear PET underlying container or bottle, which preserves the recyclability of the container or bottle.” EX1001 at 7:4-17. “Any inks and coatings printed onto

the PET shrink film may be formulated to wash off the film during the recycling process, allowing the underlying clear PET film and the clear PET rigid plastic to be recycled together.” EX1001 at 7:14-34. When read by a POSITA, in light of the intrinsic record, the claim limitation “wherein the recyclable shrink label is recyclable” is definite.

Petitioner admits that “the ’422 Patent defines what makes a shrink label recyclable,” but argues it “does so in several disparate ways.” Pet. at 54. Petitioner then recites a laundry list of nine purported “definitions.” Although the specification of the ’422 Patent does describe multiple embodiments, the Federal Circuit has “interpreted claims to exclude embodiments of the patented invention where those embodiments are clearly disclaimed in the specification, or prosecution history.” *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1277 (Fed. Cir. 2008) (internal citations omitted) (citing *N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1345-46 (Fed. Cir. 2005) (“As the district court recognized, the fact that claims do not cover certain embodiments disclosed in the patent is compelled when narrowing amendments are made in order to gain allowance over prior art.”)). Here, where the prosecution history unambiguously provides a clear understanding as to how a certain term should be understood, embodiments that fall outside of the claim scope do not render the claims indefinite.

Yet, several passages cited by Petitioner from the specification and file history are wholly consistent with the prosecution history disclaimer. For example, as explained above, the '422 Patent defines recyclable in the context of a label by stating that “[g]enerally clear crystallizable heat shrink films (e.g., PET shrink films) are considered recyclable if no inks are retained on the film after a caustic wash cycle typically used in PET reclaiming processes.” EX1001 at 6:61-65. As explained in the context of above, this allows for the label to be recycled “with the PET container.” Other passages cited by Petitioner that describe the ink used are consistent with this understanding.

Such passages include: (1) “the inks utilized in the labels of the present disclosure, including the light blocking inks, are ***designed to wash off*** the film during a reclaiming process allowing the labels and containers they cover to be recycled” (EX1001 at 7:9-13) (emphasis added); (2) “the labels may include ***inks that can be washed*** off in a typical PET recycling wash (caustic wash) and the polymers used in the labels are preferably clear (preferably clear PET)” (EX1001 at 11:45-49) (emphasis added); (3) “the labels are ***free or substantially free of inks that cannot be washed off*** in a caustic wash” (EX1001 at 11:49-51) (emphasis added). Such descriptions are consistent with “no inks retained on the film after a caustic wash.”

The '422 specification also provides that “the labels are free or substantially free of colored plastics (including white plastics) that cannot be recycled.” EX1001 at 11:51-53. As Patent Owner explained during prosecution:

Even if the label in Mitchell '879 was otherwise capable of being recycled, the pigments being incorporated into the core layer polymer would contaminate the polymer flake during the recycling process ... [i]n contrast, the present application teaches that the inks and pigments used in the recyclable shrink label may be removed by washing, *leaving behind a label that can be recycled with the article.*

EX1002 at 337 (emphasis added).

When a label includes colored or pigmented plastics (including white plastics), it “cannot be recycled with clear PET bottles or containers and therefore those products are not recycled and go to the landfill.” EX1001 at 7:1-8. This is consistent with the claimed recyclable shrink labels using ink that is designed to wash off in a caustic wash to maintain recyclability with PET containers.

Finally, all of these cited passages align with the statement that “the labels of the present disclosure are fully recyclable.” EX1001 at 11:29-53. Petitioner's assertion that it is undeterminable whether the claim term requires the label to be “recyclable” or “fully recyclable” ignores the claim language and the prosecution history. The claims of the '422 Patent recite “the recyclable shrink label is recyclable with a PET container.” The term “fully recyclable” is used only one other time in

the specification in the context of the APR Critical Guidance Protocol, which “can be considered as certifying that the film is fully recyclable *with the container or bottle.*” EX1001 at 11:29-53 (emphasis added). This language appears in the same paragraph as the other use of “fully recyclable. Moreover, this is wholly consistent with the disavowal of claim scope in the prosecution history wherein the Patent Owner unmistakably limited the term “recyclable” in the context of the ’422 Patent to mean “capable of being recycled without removing the label from a container before or during the recycling process.” *See supra* III.A.

In the context of the ’422 Patent claims, specification, and prosecution history, a POSITA would have understood the scope of this term with reasonable certainty. Petitioner has not shown that any challenged claim is unpatentable for indefiniteness.

V. CONCLUSION

In conclusion, Petitioner has failed to meet the more likely than not standard that any of the challenged claims of the ’422 Patent is unpatentable under any of the grounds raised in its Petition. Thus, Patent Owner respectfully requests that that USPTO deny institution of Post Grant Review of claims 1-19 of the ’422 Patent.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Patent Owner's Preliminary Response was served on the 23rd day of June, 2025, via electronic mail directed to counsel of record for the Petitioners:

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CERTIFICATE OF COMPLIANCE

This Patent Owner's Preliminary Response complies with the type-volume limitations as mandated in 37 C.F.R. § 42.24. According to the word processing system used to prepare this document, the brief contains 7,152 (18,700 limit) words.

/s/ W. Todd Baker

W. Todd Baker