

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MULTI-COLOR CORPORATION,
Petitioner,

v.

BROOK & WHITTLE LTD,
Patent Owner.

PGR2025-00025
Patent 11,961,422 B2

Before JOHN G. NEW, KIMBERLY McGRAW, and SHELDON M.
McGEE, *Administrative Patent Judges*.

McGRAW, *Administrative Patent Judge*.

DECISION
Granting Institution of Post-Grant Review
35 U.S.C. § 324

I. INTRODUCTION

A. Background and Summary

Multi-Color Corporation (“Petitioner”) filed a Petition requesting post-grant review of claims 1–19 of U.S. Patent No. 11,961,422 B2 (Ex. 1001, “the ’422 Patent”). Paper 2 (“Pet.”). Brook & Whittle Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). Thereafter, Petitioner filed an authorized Reply (Paper 12) to which Patent Owner filed a Sur-Reply (Paper 13).

Patent Owner also filed a request for discretionary denial (Paper 7), to which Petitioner filed an opposition (Paper 9). The Director denied the request for discretionary denial and referred the Petition to the Board. Paper 10, 3.

Under 35 U.S.C. § 324(a), a post-grant review may be instituted only if “the information presented in the petition . . . demonstrate[s] that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” Post-grant review is available for patents that issue from applications that at one point contained at least one claim with an effective filing date on or after March 16, 2013. *See Leahy-Smith America Invents Act*, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), §§ 3(n)(1), 6(f)(2)(A).

After considering the briefing and the evidence of record, for the reasons set forth below, we determine that Petitioner has shown that the ’422 Patent is eligible for post-grant review and has shown it is more likely than not that at least one challenged claim of the ’422 Patent is unpatentable under § 324(a). Accordingly, we institute a post-grant review of the challenged claims of the ’422 Patent.

B. Real Parties in Interest

Petitioner identifies itself as a real party-in-interest. Pet. 1. Patent Owner identifies itself as the real party-in-interest. Paper 4, 2.

C. Related Matters

The parties identify *Brook & Whittle LTD. v. Nestle USA, Inc.* Case No. 2:2024-cv-00735 (E.D.Tx) and *American Fuji Seal, Inc. v. Brook & Whittle LRD*, Case No. 1:24-cv-01215 (D. Del.) as related matters. Pet. 1; Paper 4, 2.

D. Overview of the '422 Patent

The '422 Patent, titled “Recyclable Heat Shrink Film for Recyclable Container” states that there is a need for recyclable, light protective packaging options. Ex. 1001, code (54), 1:26–28. The '422 Patent states that clear polyethylene terephthalate (“PET”) packaging provides a cost effective recyclable option, but that most color impregnated bottles and bottles having white shrink films, which block harmful light rays, are not recycled. *Id.* at 1:23–25.

The '422 Patent states that it provides a recyclable shrink label that may be applied to recyclable containers, that both the shrink label and the container can be directed into a recycling stream, and that both the container and the label include PET. *Id.* at code (57). The recyclable shrink label includes a heat shrink film that can include a light blocking layer comprising a light blocking component constructed to block at least 80% of the incident light having wavelengths in a range of 200 nm to 900 nm, an indicia layer, and a high opacity layer. *Id.*

E. The Challenged Claims

Petitioner challenges claims 1–19 of the '422 Patent, of which claims 1 and 19 are independent. Claim 1 is illustrative and is reproduced below.

[PRE] 1. A recyclable shrink label comprising:

- [1.A.1] a heat shrink film comprising polyethylene terephthalate (PET) and [1.A.2] having a first surface and a second surface opposite of the first surface, the heat shrink film having a thickness from 15 μm to 100 μm ; and
- [1.B.1] a light blocking layer disposed adjacent the first surface and comprising a light blocking component, [1.B.2] the light blocking layer being constructed for the recyclable shrink label to block at least 80% of incident light having wavelengths in a range of 200 nm to 900 nm, [1.B.3] wherein the light blocking component comprises a particulate having a particle size of 0.1 μm to 100 μm , [1.B.4] wherein the particulate comprises metal, metal oxide, a reflective pigment, carbon black, mica, or a combination thereof, and
- [1.C] wherein the recyclable shrink label is recyclable with a PET container.

Ex. 1001, 28:21–37 (bracketed material added for convenience and clarity).

F. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–19 are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis
1–3, 5–19	102(a)(1)	Multi-Color’s Gatorade Label ²
4	103	Multi-Color’s Gatorade Label, the knowledge of one of ordinary skill in the art, including Mitchell ³
4	103	Multi-Color’s Gatorade Label and Multi-Color’s Febreze Label ⁴
1–19	112	Indefiniteness

Pet. 4. Petitioner relies on the Declarations of Mr. Craig Bushman (Ex. 1013) and Dr. Michael Deible (Ex. 1014).

II. PRELIMINARY MATTERS

A. *Eligibility for Post-Grant Review*

The post-grant review (“PGR”) provisions of the Leahy-Smith America Invents Act (“AIA”) apply only to patents subject to the first inventor to file provisions of the AIA. AIA § 6(f)(2)(A). Specifically, the first inventor to file provisions apply to any application for patent, and to any patent issuing thereon, that contains or contained at any time a claim to a

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 112. Because the challenged claims of the ’422 Patent have an effective filing date after the effective date of the applicable AIA amendment, we refer to the AIA version of 35 U.S.C. §§ 102, 103, 112.

² Multi-Color’s Gatorade label (Ex. 1003, “Multi-Color’s Gatorade Label” or “Gatorade Label”), assertedly produced and sold publicly in 2020. Pet. 14; Ex. 1013 ¶¶ 53–56.

³ US 2017/0223879, published Aug. 3, 2017 (Ex. 3002, “Mitchell”). See Pet. 14.

⁴ Multi-Color’s Febreze Label (Ex. 1004, “Multi-Color’s Febreze Label” or “Febreze Label”), assertedly produced and sold publicly in 2018. Pet. 14; Ex. 1013 ¶¶ 62–63.

claimed invention that has an effective filing date on or after March 16, 2013. AIA § 3(n)(1). Furthermore, “[a] petition for a post-grant review may only be filed not later than the date that is 9 months after the date of the grant of the patent or of the issuance of a reissue patent (as the case may be).” 35 U.S.C. § 321(c); *see also* 37 C.F.R. § 42.202(a) (setting forth the same). Petitioner has the burden of demonstrating eligibility for post-grant review. *See Mylan Pharms. Inc. v. Yeda Res. & Dev. Co.*, PGR2016-00010, Paper 9 at 10 (PTAB Aug. 15, 2016).

The effective filing date of an application for a patent on an invention is “the filing date of the earliest application for which the . . . application is entitled, as to such invention, to a right of priority under section 119, 365(a), 365(b), 386(a), or 386(b) or to the benefit of an earlier filing date under section 120, 121, 365(c), or 386(c).” 35 U.S.C. § 100(i)(1)(B). In the event that the application is not entitled to any earlier filing date or right of priority, the effective filing date is “the actual filing date of . . . the application for the patent containing a claim to the invention.” 35 U.S.C. § 100(i)(1)(A).

The ’422 Patent issued on April 16, 2024 from U.S. Application No. 18/103,234, filed on January 30, 2023 (“the ’234 application”). Ex. 1001, codes (21), (22), (45). The ’234 application claims priority as a continuation application to PCT/US2022/029280, filed May 13, 2022, and to Provisional application No. 63/188,794, filed May 14, 2021. *Id.* at codes (60), (63). Thus, the ’422 Patent contains a claim that has an effective filing date on or after March 16, 2013 and the Petition was filed within nine months of the ’422 Patent’s issue date. *See* Paper 5 (showing a filing date of January 16, 2025).

Petitioner certifies that the '422 Patent is available for post-grant review. Pet. 1. On this record, we agree with the Petitioner and determine that the '422 Patent is eligible for post-grant review.

B. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art “would possess at least (1) a Bachelor’s degree in chemistry or a related field, with (2) five years of experience in material identification and characterization using multiple analytical methods and field sampling, or equivalent research or professional experience.” Pet. 12 (citing Ex. 1014 ¶ 24). Patent Owner does not dispute Petitioner’s definition for one of ordinary skill in the art nor provide a proposed definition of its own. *See generally* Prelim. Resp.

For the purposes of this Decision, we adopt Petitioner’s undisputed proposal regarding the level of one of ordinary skill in the art.

C. Claim Construction

Petitioner asserts that claims 1–19 are “to be given their broadest reasonable interpretation in light of the specification, as understood by one of ordinary skill in the art” and that all claim terms “should be construed according to the *Phillips* standard.” Pet. 12. Petitioner further asserts that given the similarities between the asserted art and combinations in grounds 1–3 and the embodiments disclosed in the '422 Patent, that “no formal construction is necessary in this proceeding.” Pet. 12–13.

Petitioner also argues that each of the challenged claims are indefinite because the term “wherein the recyclable shrink label is recyclable” in each independent claim fails to inform a POSITA of the claim scope with any reasonable certainty. *See, e.g.*, Pet. 4, 53–58; Reply 2–4.

Patent Owner responds that the claims are not indefinite. Prelim. Resp. 1, 31–37; Sur-Reply 1–5. Patent Owner asserts that in view of the unmistakable prosecution history disclaimer, the term “recyclable” should be construed as “capable of being recycled without removing the label from a container before during the recycling process.” Prelim. Resp. 11–14 (citing Ex. 1002, 316, 335).

In its Reply, Petitioner asserts that Patent Owner’s construction does not provide any guidance or meaningful criteria as to what constitutes a “recyclable” label. Reply 1–4. In the Sur-Reply, Patent Owner responds that it “does not, nor needs to, take a position on every requirement for a label to be recyclable,” that based on its disavowal, “recyclability requires a label that need not be removed from the container before or during the recycling process to practice its claimed invention,” and that “whether or not other properties are required to render a label ‘recyclable’ is irrelevant.” Sur-Reply 4–5 (emphasis omitted).

1. Analysis

For proceedings, such as this one, filed on or after November 13, 2018, the Board no longer applies the “broadest reasonable construction” of claims. *See* 37 C.F.R. § 42.200(b) (2024); *see also Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (stating the “broadest reasonable interpretation” standard is not applicable to proceedings filed on or after November 13, 2018). Rather, the Board construes claims at issue in a post-grant review proceeding using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.200(b) (2024).

This includes applying the claim construction standard articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Under *Phillips*, claim terms are afforded “their ordinary and customary meaning,” which is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention in the context of the specification and prosecution history. *See Phillips*, 415 F.3d at 1312–1313; *see also id.* at 1317 (stating like the specification, “the prosecution history provides evidence of how the PTO and the inventor understood the patent”). “The plain meaning of the 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 Communications, LLC v. Int’l Trade Comm’n*, 690 F.3d 1318, 1324 (Fed. Cir. 2012). Prosecution history disclaimer requires that the “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). However, even where “prosecution history statements do not rise to the level of unmistakable disavowal, they do inform the claim construction.” *Personalized Media Communications, LLC v. Apple Inc.*, 952 F.3d 1336, 1340 (Fed. Cir. 2020). For example, an “applicant’s amendment accompanied by explanatory remarks can define a claim term by demonstrating what the applicant meant by the amendment.” *Id.*

During prosecution, the applicant added the claim language “wherein the recyclable shrink label is recyclable with a PET container” to distinguish over the Mitchell reference (US 2017/0223879, Ex. 3002). Ex. 1002, 334–

336. The applicant explained that not all combinations of shrink films and light blocking materials are recyclable. *Id.* at 335. The applicant explained that films can be compatible with PET recycling in two ways, (1) the film can float in water and be separated from PET that sinks in water or (2) the PET films crystallize and “can be recovered with the PET stream.” *Id.* at 336 (citing “A Resource Document by the Association of Plastic Recyclers (APR)”) (found at Ex. 1002, 323–332) (emphasis omitted). The applicant explained that “removing the label before or during the recycling process is not evidence of the recyclability of the label” and that “[r]emoving the label during the recycling process is not equivalent to actually recycling the label.” *Id.* at 335. As such, a POSITA reading the prosecution history would understand that a label is not recyclable *with a* PET container, as recited by the independent claims, by removing the label from the PET recycle stream before or during the recycling process.

The applicant further stated that even if Mitchell’s label was otherwise capable of being recycled, the label contained pigments, such as titanium dioxide incorporated into the polymer layer, that would contaminate the polymer flake during the recycling process. *Id.* at 337 (citing “APR document page 2”); *see also id.* at 324 (APR document page 2) (stating that an “[i]f the ink separates from the label film in the wash step, it is desirable that the ink be readily filtered from the PET flake as well as the wash water”). The applicant explained that, in contrast to Mitchell, that the application teaches that inks and pigments used in the shrink label may be removed by washing, leaving behind a label that can be recycled with the article. *Id.* at 337. As such, a POSITA reading the prosecution history would understand that a label is not recyclable *with a* PET container if the

label has ink or pigments that contaminate the polymer flake during the recycling process.

For purposes of addressing the alleged anticipation and obviousness grounds, we construe the term “wherein the recyclable shrink label is recyclable with a PET label,” in accordance with the above representations of the applicant who stated that a label is *not* recyclable with a PET container if (1) the label must be removed from the PET recycling stream for the PET container to be recycled (e.g., because the label itself is made of materials that are not recyclable with a PET container, such as polypropylene, polyethylene, or paper) or (2) the label contains inks or pigments that could not be removed during recycling process, such as by washing, so that the inks or pigments would contaminate the PET polymer flake during the recycling process. *See* Ex. 1002, 336–337; *see also* Sur-Reply 1 (agreeing that Patent Owner “unmistakably disavowed” during prosecution any claim scope of “recyclable” that requires “removing the label before or during the recycling process”).

Patent Owner states that other than the requirement that “recyclability requires a label that need not be removed from the container before or during the recycling process, whether or not any other properties are required to render a label “recyclable” is “irrelevant.” Sur-Reply 4–5 (emphasis omitted). We disagree. The above prosecution history statements show that the Applicant explained that a label is “unrecyclable” if it contains pigments or inks that “would contaminate the polymer flake during the recycling process.” Ex. 1002, 337.

Moreover, the above discussed prosecution history statements address when a label is *not* recyclable with a PET label but does not address when a

label *is* recyclable with a PET label. Thus, it is still necessary to determine when a label is “recyclable” according to the claim language.

To determine how a person skill in the art would determine if a shrink label is “recyclable” as recited in the independent claims, we look to how the Specification of the ’422 Patent describes or defines recyclable shrink labels. For example, the ’422 Patent states that PET shrink films are generally considered recyclable if no inks are retained on the film after a caustic wash cycle typically used in PET reclaiming processes. Ex. 1001, 6:61–65. The ’422 Patent further states that labels are *fully recyclable* if the polymers used are clear, preferably clear PET, *and* the labels include inks that can be washed off in a “typical PET recycling wash (caustic wash).” *Id.* at 11:44–49; *see also id.* at 11:49–54 (describing embodiments in which the labels are free or substantially free of inks that cannot be washed off in a caustic wash or where the labels are free or substantially free of color plastics that cannot be recycled). The ’422 Patent further discusses “industry standards” for determining whether various embodiments of shrink labels are recyclable. *See, e.g., id.* at 11:29–53. For example, the Specification states that the “Association for Plastic Recyclers (APR) Critical Guidance Protocol for Clear PET Articles with Labels and Closures (PET-CG-02)” (Ex. 1005) can certify that a film is fully recyclable with a container or bottle. *Id.* at 11:34–38. Additionally, the Specification states that labels “are recyclable according to the Evaluation of the Near Infrared (NIR) Sorting Potential of a Whole Plastic Article (SORT-B-01)” (Ex. 1010) and/or the “Evaluation of Sorting Potential for Plastic Articles Utilizing Metal, Metalized, or Metallic Printed Components (SORT-B-03)” (Ex. 1011). Ex. 1001, 11:39–44. The ’422 Patent further states that embodiments of the labels “are fully

recyclable. For example, the labels may include inks that can be washed off in a typical PET recycling wash (caustic wash) and the polymers” are preferably clear PET. *Id.* at 11:44–48.

The ’422 Patent thus provides various descriptions or standards to determine the recyclability of shrink labels. For the purposes of addressing the anticipation and obviousness grounds, we determine that any of these standards can be used to determine if a shrink label is “recyclable.”

We note that our construction is preliminary and is based on the present record. We invite the parties to further address the construction of “wherein the recyclable shrink label is recyclable with a PET container” during trial.

We discuss whether “recyclable” is indefinite in Section II.E.2, *infra*.

D. Asserted Anticipation of Claims 1–3 and 5–19 by the Gatorade Label (Ground 1)

Petitioner argues that claims 1–3 and 5–19 are anticipated by the Gatorade Label. Pet. 5–39.

1. Gatorade Label (Ex. 1003)

Petitioner asserts that the Gatorade Label is a shrink sleeve label recyclable with a PET container that was produced and sold publicly in 2020 that qualifies as prior art under § 102(a)(1). Pet. 3, 14 (citing Ex. 1013 ¶¶ 53–60); Ex. 1014 ¶ 55. At this stage of the proceeding, Patent Owner does not dispute that the Gatorade Label qualifies as prior art.

Petitioner identifies the location of cross-section samples taken from Multi-Color Gatorade Label samples 3191157 and 3191168.⁵ Pet. 18;

⁵ Although Petitioner also states that cross samples were taken from samples 3191115, 3191167, 3191176, the present record does not appear to sufficiently show that any of these three samples are from a Gatorade label.

Ex. 1014 ¶¶ 55, 62. Petitioner also states that, *inter alia*, samples 3191158, 3191169, and 3191171 were also taken from a Gatorade Label. *See, e.g.*, Pet. 34–36, 39; Ex. 1014 ¶¶ 83, 86, 88, 101.

At this stage of the proceeding, Patent Owner does not dispute the Multi-Color Gatorade Label qualifies as prior art under § 102(a)(1) or that Petitioner identifies the region of the Gatorade Label from which Examples 3191557 and 3191168 were selected. Prelim. Resp. 15. Patent Owner also notes that although certain other samples may be associated with the Gatorade Label, the Petition does not clearly label these samples. *Id.* Whether or not Petitioner sufficiently and accurately identifies certain other of the Gatorade Label samples is an issue best resolved on a full record.

2. Claim 1

Petitioner asserts that the Gatorade Label discloses all limitations of claim 1. Pet. 15–31. For example, Petitioner asserts that the Gatorade Label is a “recyclable shrink label comprising a heat shrink film comprising polyethylene terephthalate (PET)” as recited in the preamble and claim element [1.A.1]. Pet. 15–16 (citing Ex. 1013 ¶¶ 53–60; Ex. 1014 ¶¶ 57, 60, 61, 83); *see also* Pet. 16, Fig. 2 (depicting Fourier Transform Infrared Spectroscopy (“FTIR”) analysis of, *inter alia*, Gatorade Label 3191157). Petitioner points to a scanning electron microscopy (“SEM”) image of the cross section of Gatorade Label 3191157 (Pet. 19, Fig. 5b) depicting a “D1” distance of 50.74 microns to support its assertion that the label has “a first surface and a second surface opposite of the first surface, the heat shrink

Pet. 18. Sample 3191115 appears to be from a Febreze label, not a Gatorade label. *Id.* The Petition does not clearly identify the source of samples 3191167 or 3191176. *See, e.g.*, Pet. 17, 18; Ex. 1014 ¶¶ 62–63.

film having a thickness from 15 μm to 100 μm ” as recited in claim element [1.A.2]. Pet. 17–21 (citing, *inter alia*, Ex. 1014 ¶¶ 62–64); *see also* Pet. 18, Fig. 4 (depicting Gatorade Labels 3191157 and 3191168); Pet. 18 (stating “all samples have a heat shrink PET film thickness of approximately 40–60 microns”).

Petitioner further asserts the Gatorade Label has a “titanium dioxide high opacity layer” having titanium dioxide (which blocks light) thus disclosing the “light blocking layer disposed adjacent the first surface and comprising a light blocking component” recited in claim element [1.B.1]. Pet. 21–29 (citing Ex. 1014 ¶¶ 65–66); *see also* Pet. 24, Fig. 6b (depicting the EDS analysis of Gatorade Label 3191157); Pet. 29, Fig. 7 (depicting transmission measurements of, *inter alia*, Gatorade Label 3191168); Petitioner asserts, *inter alia*, that Figure 6b is an SEM image of a cross section of Gatorade Label sample 3191157 wherein the PET film is on the bottom of the image and the surface at the top of the image is the surface that would contact the substrate. Pet. 23, Fig. 6b.

Petitioner also asserts the Gatorade Label blocks at least 80% of the light in the 220 to 900 nm range, thus satisfying claim element [1.B.2]. Pet. 29–30 (citing Ex. 1014 ¶¶ 67–69; Ex. 1001, 13:47); *see also* Pet. 29, Fig. 7 (depicting transmission measurements of sample 3191168). Petitioner asserts that the Gatorade Label’s primary light blocking component of its light blocking layer are aluminum flakes having a thickness between 0.1 μm to 100 μm , thus disclosing the limitations recited in claim element [1.B.3] and [1.B.4]. Pet. 30 (citing Ex. 1014 ¶ 70, images 5, 6); *see also* Pet. 24, Fig. 6b (SEM image and EDS analysis of 3191157).

Finally, Petitioner asserts the Gatorade Label is a recyclable shrink label that is recyclable with a PET container, as recited in claim element [1.C.3]. Pet. 30–31 (citing Ex. 1001, 6:61–64, 11:29–53; Ex. 1012; Ex. 1013 ¶ 47; Ex. 1014 ¶¶ 71–77; Ex. 1016; Ex. 1018; Ex. 1019); *see also* Ex. 1013 ¶ 53 (testifying that the Gatorade Label is recyclable with a PET container).

Petitioner points to test “RD-TM-210-4” (Ex. 1012) and asserts that the label’s ink is removed during the caustic wash cycle, that the ink is separated from the flake mixture during the sieving process, and that the ink is not staining or dyeing the PET flakes. Pet. 30–31; *see also* Ex. 1012, 1.1 (“[I]t is desirable that the ink be readily filtered from the PET flake as well as the wash water.”), 1.2 (stating the disclosed test method is the default method for evaluating floatability and ink bleed performance per caustic bath testing). Petitioner further asserts that the Gatorade Label is an SKC Ecolabel sleeve label that meets or exceeds the “APR’s Critical Guidance Protocol for Clear PET Articles with Labels and Closures Document requirements” and that the silver ink used in connection with the label passes the recyclability/bleed testing set forth in the protocol established by the Association of Post Consumer of Plastic Recyclers. Pet. 31 (citing Ex. 1013 ¶ 47; Ex. 1016; Ex. 1018; Ex. 1019); *see also* Ex. 1001, 11:34–38 (stating that the “Association for Plastic Recyclers (APR) Critical Guidance Protocol for Clear PET Articles with Labels and Closures (PET-CG-02)” can certify that a film is fully recyclable with container or bottle.); *id.* at 11:34–38; *see also* Ex. 1005.

As noted above, for purposes of addressing Petitioner’s anticipation challenges, we construe the term “wherein the recyclable shrink label is

recyclable with a PET label,” in accordance with applicant’s statements during prosecution that a label is not recyclable with a PET container if (1) the label must be removed from the PET recycling stream for the PET container to be recycled (e.g., because the label itself is made of materials that are not recyclable with a PET container, such as polypropylene, polyethylene, or paper) or (2) the label contains inks or pigments that could not be removed during recycling process, such as by washing, so that inks or labels would contaminate the PET polymer flake during the recycling process. Additionally, for the purposes of addressing Petitioner’s anticipation challenges, we determine that a label is “recyclable” if it meets any of the standards or discussions of recyclability set forth in the Specification.

After reviewing the parties’ briefs and supporting evidence, we determine that Petitioner has shown that Gatorade Label, as evidenced by, *inter alia*, samples 3191157 and 3191168, evinces each element of claim 1. As such, Petitioner’s argument and evidence, as set forth above, sufficiently shows that it is more likely than not that claim 1 is anticipated by the Gatorade Label, notwithstanding Patent Owner’s arguments, which we address below.

Patent Owner asserts that Petitioner’s evidence is vague and unclear, noting that sample 3191115 relates to a Febreze label, not a Gatorade Label, and that it is unclear if a number of the other relied upon samples are in fact from a Gatorade Label. Prelim. Resp. 15 (questioning whether certain samples are associated with the Gatorade Label as they are not clearly labeled). We agree with Patent Owner that Febreze label evidence, or other non-Gatorade Label evidence, would not support Petitioner’s challenge that

the Gatorade Label anticipates claim 1. However, Petitioner also relies on, at least, samples 3191157 and 3191168, which Patent Owner admits are samples reportedly taken from specific regions of Gatorade Labels (Prelim. Resp. 15), to show anticipation of each claim limitation. Petitioner's arguments and evidence regarding these samples, as set forth above, sufficiently show that the Gatorade Label samples disclose each element of claim 1.

Patent Owner also asserts that the claims do 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. Prelim. Resp. 19. Patent Owner contends that 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." *Id.* This argument is not persuasive as Petitioner provides argument and evidence, including declarant testimony supported by evidence, sufficient to show at this stage of the proceeding that the Gatorade Label can be recycled without removing the label from the bottle. For example, Dr. Deibel testifies that the Gatorade Label can be recycled without removing the label. *See, e.g.,* Ex. 1014 ¶¶ 57, 71–79. Petitioner provides, *inter alia*, argument and evidence that the Gatorade Label can be recycled with a PET container without removing the label, including evidence that ink is removed during the caustic wash cycle and that the ink is readily separated from the flake mixture during the sieving process and is not staining or dyeing the PET flakes; the Gatorade Label is an SKC Ecolabel sleeve label that meets or exceeds the "APR's Critical Guidance Protocol for Clear PET Articles with Labels and Closures Document requirements"

(“APR Critical Guidance”); and that the inks used in connection with the label pass the recyclability/bleed testing set established by the Association of Postconsumer of Plastic Recyclers. Pet. 30–31 (citing Ex. 1001, 6:61–64, 11:29–53; Ex. 1012; Ex. 1013 ¶¶ 47–48; Ex. 1014 ¶¶ 71–77; Ex. 1016; Ex. 1018; Ex. 1019).

Patent Owner also asserts that the APR Critical Guidance document does “not necessarily apply to labeled bottles” (Prelim. Resp. 24 (emphasis omitted)) or the label once printed with ink layers (*id.* at 35). *See also id.* at 25. However, the claims are directed to a shrink wrap label that is *capable* of being recycled with a PET container and not to the labeled bottles themselves. Petitioner provides sufficient evidence, as described above, to show that the Gatorade Label could be recycled with a PET bottle. Patent Owner’s arguments to the contrary raise a dispute best resolved on a full record. Similarly, Patent Owner’s arguments that the images for sample 3191157 (Ex. 1014, Fig. 11b) show ink retained on film after caustic wash, and that “without removing the ink fully, it cannot fall into the second category where in the label ‘can be recovered with the PET stream’” raise disputes best resolved on a full record—particularly when the Specification appears to distinguish between labels that are “recyclable” and “fully recyclable.” Prelim. Resp. 20–21 (citing Ex. 1002, 336; Ex. 1014, Fig. 11b); *see also* Ex. 1001, 11:29–44, 11:49–54 (stating discussing recyclable labels that are “free or *substantially free* of inks that cannot be washed off in a caustic wash”) (emphasis added).

Having considered the arguments and evidence at this stage of the proceeding, we determine that Petitioner has shown it is more likely than not that claim 1 is anticipated by the Gatorade Label.

Because Petitioner has sufficiently shown that at least one claim is unpatentable, we institute a post-grant review as to all of the challenged claims and grounds contained in the Petition. 37 C.F.R. § 42.208(a) (“When instituting post-grant review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim”); *SAS Inst., Inc. v. Iancu*, 584 U.S. 357, 371 (2018); USPTO, Guidance on the Impact of SAS on AIA Trial Proceedings (Apr. 26, 2018)⁶.

We offer the following view on the remaining claims and grounds for the parties’ consideration.

3. *Claims 2–3 and 5–19*

Petitioner provides argument and evidence that the Gatorade Label evinces the limitations of claims 2–19. Pet. 32–41. Other than repeating its arguments set forth for claim 1, Patent Owner does not contest most of Petitioner’s contentions regarding claims 2–19 at this stage of the proceeding, but does argue that Petitioner has not shown that claims 12, 13, and 19 are anticipated by the Gatorade Label. We provide the following comments.

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.*” Ex. 1001, 29:4–9 (emphasis added). Petitioner asserts that Dr. Deible measured the weight percentage of aluminum in a label sample and calculated that the amount of light blocking layer present and that the amount of the light blocking layer meets the limitations of claim

⁶ Available at: <https://www.uspto.gov/patents/ptab/trials/guidance-impact-sas-aia-trial>

12 and 13. Pet. 37–38 (citing Ex. 1014 ¶¶ 92–97). Patent Owner responds that Dr. Deible makes unsupported assumptions about the weight of the light-blocking layer and, thus, Petitioner failed to prove that the Gatorade Label meets these limitations. Prelim. Resp. 25–26 (citing Ex. 1014 ¶ 93). Patent Owner’s argument is not sufficient at this stage of the proceeding. Petitioner explains that it based the weight of the light blocking layer using the weight percent of aluminum. Pet. 37 (citing Ex. 1014 ¶¶ 93–96). Whether the methods used by Dr. Deible is sufficient to demonstrate that the Gatorade Label meets the limitations recited in claim 12 is an issue best resolved on a full record.

For claim 19, Patent Owner asserts that Petitioner fails to show the same limitations that are also found in claim 1, for the same reasons asserted for claim 1. Prelim. Resp. 26. This argument is not persuasive at this stage of the proceeding for the same reasons stated above regarding claim 1.

E. Guidance on Remaining Challenges

1. Alleged Obviousness of Claim 4 over Gatorade Label and either the knowledge of a POSITA, including Mitchell, or the Febreze Label

Claim 4 depends from claim 1 and further requires that “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.” Petitioner asserts that it would have been obvious to a POSITA to modify the order of layers of the Gatorade Label to provide the metallization layer between the indicia layer and light blocking layer based on the knowledge of a POSITA, including as taught by either Mitchell (Pet. 41–47, ground 2) or by the Febreze label (Pet. 48–53, ground 3). Petitioner asserts that the Gatorade Label and the Mitchell/Febreze label have similar purpose, composition, and structure as they each have an indicia layer, a high opacity

layer, and a light blocking layer in close proximity to each other, and that only a very minor modification is required to change the Gatorade Label as taught by the Mitchell/Febreze labels. Pet. 42–43, 49. Petitioner asserts, *inter alia*, that it would have been obvious to modify the Gatorade Label because adjusting label layers was a known technique that would have yielded predictable results with a reasonable expectation of success. *See, e.g.*, Pet. 46, 52. We have reviewed Petitioner’s argument and evidence, which appear to have merit.

Patent Owner responds that it would not have been obvious to modify the Gatorade Label to switch the layer order to arrive at the subject matter of claim 4. Prelim. Resp. 26–31. Patent Owner asserts that the Gatorade Label appears to be specifically designed to include metallic elements for aesthetic purposes and that changing the order of the layers would obscure the metallic ink. *Id.* at 27, 30. Whether or not altering the layer would obscure the ink is a disputed issue best resolved on a full trial record.

Patent Owner also argues that Petitioner has not explained whether either the container disclosed in Mitchell, or the Febreze bottle, is PET, which constitutes a significant “failure of proof.” *See, e.g.*, Pet. 28, 30–31. The claims, however, require that the shrink label be *capable* of being recycled with a PET container, not that the label has in fact been recycled with a PET container. Thus, the issue is whether Petitioner has sufficiently shown that the modified Gatorade Label is capable of being recycled with a PET container. This is a factual issue best resolved on a full record and the parties are invited to address this issue during trial.

Finally, Patent Owner argues that the Petitioner does not explain why Gatorade’s food product label would have the same purpose, composition,

and structure as Febreze’s air freshener label. Prelim. Resp. 29. It appears, based on the present record, however, that Petitioner provides argument and evidence regarding the similarities of the labels. *See, e.g.*, Pet. 48–49 (citing Ex. 1013 ¶¶ 44, 50–52, 56).

2. *Alleged Indefiniteness of Challenged Claims under 35 U.S.C. § 112*

Petitioner argues that claims 1–19 are indefinite under 35 U.S.C. § 112(b) because the term “wherein the recyclable shrink label is recyclable” fails to inform a POSITA of the claim scope with reasonable certainty. Pet. 53–58. Petitioner asserts that there are numerous definitions of “recyclable” and that it is not clear which definition to apply to determine what falls within the scope of the claims. Pet. 54–56.

Patent Owner responds that any claim scope of “recyclable” that requires removing the label before or during the recycling process was disavowed. Prelim. Resp. 31. Patent Owner further asserts that the claims require a “recyclable shrink label” that comprises a heat shrink film that comprises PET and that the label is recyclable *with* a PET container. *Id.* at 32. Patent Owner further asserts that the claims are limited to “PET based films that crystallize and can be recovered with the PET stream” and do not include films “that must be separated from PET during the recycling process.” *Id.* at 33. Patent Owner further asserts that to “ensure that a label is capable of being recycled with the PET stream . . . any ink on the label should wash off the film after a caustic wash.” *Id.* at 33–34 (citing Ex. 1001, 6:62–65, 7:14–34). On the preliminary record before us, we find that Petitioner has the better argument.

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. The definiteness requirement, so understood, mandates clarity, while recognizing that absolute precision is unattainable.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). A patent must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them. *Id.* at 909.

Although Patent Owner’s statements provided during prosecution do shed some light on what labels are considered “recyclable with a PET container” and which labels are not recyclable with a PET container, an issue still remains as to the meaning of “recyclable with a PET container.” In other words, what standard or standards are used to determine if a label is recyclable with a PET container? The ’422 Patent appears to identify three different industry standards for determining if labels are recyclable with a PET container. *See* Ex. 1001, 11:32–44. It is unclear at this stage of the proceeding whether these standards are consistent with each other, which casts sufficient ambiguity regarding the precise meaning of the claimed phrase. Conflicting definitions of claim terms can fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. *See ITM Isotope Technologies Munich SE v. Johns Hopkins University*, PGR2025-00012, Paper 12 at 17 (PTAB July 16, 2025) (citing *Nautilus*, 572 U.S. at 901); *see also* Ex. 1002, 336 (describing films that are compatible with PET recycling as PET based films that crystallize and can be recovered with the PET stream).

Additionally, the ’422 Patents states that the three identified standards are exemplary. *See* Ex. 1001, 11:34. Given that the listed standards are exemplary, this creates an issue as to how to determine what

other standards, if any, can be used to determine if a label is recyclable with a PET container. *See, e.g., Ex parte Heck*, Appeal No. 2012-012010, 2015 WL 430565 at *2–3 (PTAB Jan. 28, 2015) (stating ambiguity as to what standard to apply when determining if a tank meets “standards for storing the fuel on site rendered claim indefinite); *Cf. Ex parte McClary*, Appeal No. 2009-001300, 2010 WL 1991475, at *2 (PTAB May 17, 2010) (reversing an indefiniteness rejection of claim language “ARINC 615 protocol” because the standard for the protocol could readily be determined).

The parties are invited to address these issues during trial.

III. CONCLUSION

Based on the arguments in the Petition and the evidence of record, we determine that Petitioner has demonstrated that it is more likely than not that at least one of the claims challenged in the Petition is unpatentable. As such, we institute a post-grant review proceeding of all challenged claims based on all asserted grounds.

At this stage of the proceeding, the Board has not made a final determination as to the construction of any claim term or the patentability of any challenged claim. We will make a final determination on the patentability of the challenged claims, as necessary and applying the preponderance of the evidence standard, based on a fully developed record through trial.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 324(a), a post-grant review of all challenged claims of the '422 Patent is *instituted* with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 324(c) and 37 C.F.R. § 42.4(b), post-grant review of the '422 Patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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