

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

VÄLINGE INNOVATION AB,

Plaintiff,

v.

HALSTEAD NEW ENGLAND CORP.
and HOME DEPOT U.S.A., INC.,

Defendants.

C.A. No. 16-1082-LPS-CJB

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MEMORANDUM OPINION

May 7, 2018
Wilmington, Delaware



STARK, U.S. District Judge:

Plaintiff Välinge Innovation AB (“Plaintiff”) sued Defendants Halstead New England Corporation and Home Depot U.S.A., Inc. (collectively, “Defendants”), alleging that Defendants infringe Plaintiff’s nine asserted patents by importing, selling, or offering to sell certain flooring products. (*See generally* D.I. 26) The patents-in-suit generally relate to flooring technologies, in particular “floorboard locking mechanisms, moisture-proof systems, methods for installing resilient floorboards, and the composition of vinyl planks and tiles.” (D.I. 84.1 at 15)

Presently before the Court are the parties’ disputes over the meaning of certain claim terms in the asserted claims. The parties submitted technology tutorials (D.I. 84, 85), claim construction briefs (D.I. 86, 89, 98, 102), and expert declarations (D.I. 87, 88, 90, 91, 99, 100, 103, 104). The Court held a claim construction hearing on March 8, 2018. (*See* D.I. 129 (“Tr.”))

The parties have organized the nine asserted patents into four groups: (A) the “Chen patents;”¹(B) the “Nilsson patents;”² (C) U.S. Patent No. 7,398,625 (“‘625 patent”); and (D) U.S. Patent No. 8,584,423 (“‘423 patent”). The Court will do so as well.

I. LEGAL STANDARDS

A. Claim Construction

The ultimate question of the proper construction of a patent is a question of law. *See Teva*

¹This group consists of U.S. Patent Nos. 7,763,345 (“‘345 patent”); 8,834,992 (“‘992 patent”); 8,658,274 (“‘274 patent”); and 8,021,741 (“‘741 patent”). (D.I. 86 at 3) Defendants refer to this group as the “Mannington Patents.” (D.I. 89 at 2) They all share a common specification. (D.I. 86 at 3 n.2; D.I. 89 at 2)

²This group consists of U.S. Patent Nos. 8,365,499 (“‘499 patent”); 8,756,899 (“‘899 patent”); and 9,249,581 (“‘581 patent”). (D.I. 86 at 14; D.I. 89 at 19) They all share a common specification. (D.I. 86 at 14 n.7; D.I. 89 at 19)

Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 837 (2015) (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388-91 (1996)). “It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (internal quotation marks omitted).

“[T]here is no magic formula or catechism for conducting claim construction.” *Id.* at 1324. Instead, the Court is free to attach the appropriate weight to appropriate sources “in light of the statutes and policies that inform patent law.” *Id.*

“[T]he words of a claim are generally given 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, i.e., as of the effective filing date of the patent application.” *Id.* at 1312-13 (internal citations and quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). The patent specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

While “the claims themselves provide substantial guidance as to the meaning of particular claim terms,” the context of the surrounding words of the claim also must be considered. *Phillips*, 415 F.3d at 1314. Furthermore, “[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . [b]ecause claim terms are normally used consistently throughout the patent.” *Id.* (internal citation omitted).

It is likewise true that “[d]ifferences among claims can also be a useful guide. . . . For example, the presence of a dependent claim that adds a particular limitation gives rise to a

presumption that the limitation in question is not present in the independent claim.” *Id.* at 1314-15 (internal citation omitted). This “presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim.” *SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003).

It is also possible that “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. It bears emphasis that “[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.” *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004)) (internal quotation marks omitted).

In addition to the specification, a court “should also consider the patent’s prosecution history, if it is in evidence.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996). The prosecution history, which is “intrinsic evidence,” “consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

In some cases, “the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva*, 135 S. Ct. at 841. Extrinsic evidence “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the meaning of a term to those of skill in the relevant art because such dictionaries “endeavor to collect the accepted meanings of terms used in various fields of science and technology.” *Phillips*, 415 F.3d at 1318. In addition, expert testimony can be useful “to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.” *Id.* Nonetheless, courts must not lose sight of the fact that “expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence.” *Id.* Overall, while extrinsic evidence “may be useful” to the court, it is “less reliable” than intrinsic evidence, and its consideration “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

Finally, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.”

Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osrham GmbH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (quoting *Modine Mfg. Co. v. U.S. Int’l Trade Comm’n*, 75 F.3d 1545, 1550 (Fed. Cir. 1996)).

B. Indefiniteness

A patent claim is indefinite if, “viewed in light of the specification and prosecution history, [it fails to] 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). A claim may be indefinite if the patent does not convey with reasonable certainty how to measure a claimed feature. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015). But “[i]f such an understanding of how to measure the claimed [feature] was within the scope of knowledge possessed by one of ordinary skill in the art, there is no requirement for the specification to identify a particular measurement technique.” *Ethicon Endo–Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1319 (Fed. Cir. 2015).

II. CONSTRUCTION OF DISPUTED TERMS³

A. Chen Patents

The Chen patents are directed to a thermoplastic plank containing multiple layers. *See* ’345 patent at Abstract.⁴ The layers include a core made up of at least one thermoplastic

³Certain claim terms are no longer in dispute. (*See* D.I. 86 at 2; Tr. at 7) The Court will adopt the agreed-upon constructions.

⁴As the Chen patents share a common specification, the parties cite to just one patent in this group, the ’345 patent (D.I. 77-1 Ex.1). (*See* D.I. 86 at 3 n.2; D.I. 89 at 2 n.1) The Court will do the same, unless otherwise noted.

material, a print layer above the core, and optionally an overlay layer on top of the print layer. *Id.*

1. “flexible polyvinyl chloride”⁵

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| Plaintiff “polyvinyl chloride that is capable of being flexed” |
| Defendants “polyvinyl chloride with a plasticizer” |
| Court “polyvinyl chloride containing a plasticizer or another additive that imparts flexibility” |

The parties dispute whether a plasticizer is necessary to make flexible polyvinyl chloride (“PVC”). Plaintiff contends that the patents use the plain and ordinary meaning of flexible, and a person of ordinary skill in the art (“POSA”) would understand there are “*other ways* to make [PVC] flexible in addition to plasticizers.” (D.I. 86 at 5-9) (emphasis added) Defendants contend that this is a technical phrase and a POSA would understand it to mean “flexibility at the molecular level, which occurs *only* when combined with a plasticizer.” (D.I. 89 at 2-6) (emphasis added)

The intrinsic evidence supports a finding that a plasticizer is just one of many additives that could be used to impart flexibility to PVC. Nothing in the claim language requires a plasticizer. Nor does the specification require the use of plasticizer to impart flexibility – although it states that a plasticizer *can* be used for that purpose. *See* ’345 Patent, col. 4 ll. 19-20 (“The flexibility of the thermoplastic material can be imparted by using at least one liquid or solid plasticizer . . .”). The prosecution history also suggests that a plasticizer is not required to impart flexibility. (*See* D.I. 92 at p. 314 of 380) (applicant noting that prior art “does not teach or

⁵The term appears in all the asserted claims of the Chen patents. There is no dispute that the term has the same meaning in all the Chen patents. (*See* D.I. 86 at 5)

suggest including any plasticizer or *other flexibility-imparting additive or agent* in the core”) (emphasis added) However, Plaintiff’s construction is too broad, as it would encompass even rigid PVC. (See D.I. 90 at 13 ¶ 41) (Defendants’ expert explaining that “all PVC, whether rigid or flexible, can be flexed when incorporated into a plank suitable for use as a surface covering”) Hence, the Court has narrowed Plaintiff’s construction.

2. “not susceptible to damage caused by moisture”⁶

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| Plaintiff plain and ordinary meaning or “moisture resistant” |
| Defendants Indefinite |
| Court Indefinite |

Defendants contend that this term is indefinite because “the intrinsic record does not provide any objective indication of what level of susceptibility to moisture damage, if any, is acceptable or unacceptable.” (D.I. 89 at 15) Plaintiff responds that the term is well understood by a POSA and described adequately in the specification. (See D.I. 86 at 13)

The Court agrees with Defendants. The claim term is a term of degree and subjective, but the patent provides little guidance to a POSA as to its objective boundaries. See *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) (“[A] term of degree fails to provide sufficient notice of its scope if it depends on the unpredictable vagaries of any one person’s opinion.”) (internal quotation marks omitted). The patent lists many examples of

⁶This term appears in the following asserted claims: ’345 patent claims 1 and 23; ’992 patent claims 1, 2, 12, and 19; ’274 patent claims 1, 2, 13, 22 and 29; and ’741 patent claims 1, 2, 13, 22 and 29.

moisture damage, such as blistering, adhesions failure, dimensional instability, cupping, doming, edge peaking, swelling, edge chip-off, premature wear-out, and soiling more quickly. *See* '345 Patent, col. 1 ll. 34-44. But these examples do not support Plaintiff's assertion that "the damage assessment is binary." (D.I. 98 at 11) Based on the examples, a POSA would not be able to objectively determine with reasonable certainty whether a plank is susceptible or is not susceptible to moisture damage.

The patent also describes a "24 hours water absorption test" but does not provide any objective criteria to evaluate whether the "thickness swelling" or "water absorbency" caused by moisture damage under this test would fall within the scope of the term. *See* '345 Patent, col. 1 ll. 57-60. Nor has Plaintiff offered any persuasive evidence that a POSA would know a minimum threshold of swelling or absorbency that is required for a plank to be considered moisture damaged.

None of the specific examples of moisture damage listed in the patents provide an objective criteria for measuring moisture damage in order for a POSA to understand the scope of the term with reasonable certainty. The claimed thermoplastic plank has many layers. *See id.* col. 18 ll. 58-67 (Claim 1). As Defendants' expert explains, "a POSA would understand that the response of a plank to moisture will depend on its layer structure, the composition of its individual layers and how the layers are attached to each other . . . and how the exposure to moisture occurs." (D.I. 90 at p. 32 of 34 ¶ 82)

The claimed thermoplastic planks also have a wide range of possible uses. *See* '345 Patent, col. 12 ll. 63-67 ("The thermoplastic planks of the present invention can be used in a variety of applications including, but not limited to, wall panels, ceiling panels, flooring surfaces,

decks, patios, furniture surfaces, shelving, and other surface coverings or parts thereof.”); *see also id.* col. 10 ll. 32-38 (“Further, the laminate plank system of the present invention can be used in any environment, dry or wet, indoor or outdoor since it is not susceptible to moisture.”). As Defendants’ expert explains, the “effects of moisture on an object will vary according to the length of time the material is exposed to moisture, the moisture concentration, and the moisture temperature.” (D.I. 90 at p. 30-31 of 34 ¶ 77) Given the broad uses of the claimed invention, a POSA would not be able to determine whether a particular plank falls within the claimed limitation, as a plank susceptible to “moisture damage” under one set of conditions might be not susceptible in a different set of conditions. (*See* D.I. 90 at p. 33 of 34 ¶ 84)

Plaintiff’s expert opines that the patents contemplate a binary assessment of moisture damage similar to an industry standard that assesses damage to vinyl flooring “by visually checking a sample before, during, and after bending for any ‘breaks, cracks, or other damage.’” (D.I. 100 ¶ 43) Assuming that the industry standard is an objective method to assess damage in a binary fashion, there is nothing in the patents akin to this standard to guide a POSA to objectively determine the damage caused by exposure to moisture. Nor has the Court been provided with evidence to establish that a POSA would know, with reasonable certainty, to apply this (or any other particular) standard. Instead, to the contrary, the record contains clear and convincing evidence that a POSA would lack reasonable certainty as to the scope of this claim term.

3. “a molecular weight as reflected by an inherent viscosity of from about 0.88 to about 1.0 inherent viscosity”⁷

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| Plaintiff plain and ordinary meaning, or “an inherent viscosity of approximately 0.88 to approximately 1.0 inherent viscosity” |
| Defendants Indefinite |
| Court “an inherent viscosity of approximately 0.88 to approximately 1.0 inherent viscosity measured using the ASTM D1243 standard” |

Defendants contend that this term is indefinite because the patents “do not provide any clarity on how inherent viscosity (‘IV’) should be measured.” (D.I. 89 at 10) Plaintiff counters that the term is well understood by a POSA, as “IV values are routinely used by those in the industry.” (D.I. 86 at 12) While Defendants do not dispute that IV values are routinely used in the industry, they insist there is no single industry standard, as “there are many methods of measuring IV that are ‘routinely used in the industry,’ each resulting in different IV measurements.” (D.I. 102 at 8)

The record does not contain clear and convincing evidence of indefiniteness. The patents refer to the ASTM standard when describing certain properties of PVC, which is the claimed thermoplastic material. While the patents are silent on the specific standard for measuring IV value, *see* ’345 Patent, col. 5 ll. 5-23, the Court is persuaded by Plaintiff’s expert that ASTM 1243 is the standard used for determining IV that is specific to PVC. (D.I. 100 ¶¶ 33-34) A preferred embodiment only references ASTM standards. (*See* ’345 Patent, col. 5 l. 5)

Defendants cite to two purported standards – ASTM D2857 and ISO 1628-2 – that they

⁷This term appears in all the asserted independent claims.

argue a POSA could use for calculating the IV value of a polymer like PVC, and doing so would result in different values. (See D.I. 89 at 12) But Defendants agree that the ASTM 1243 standard “appears to be the most specific” to PVC. (Tr. at 55) In the context here, Defendants’ reliance on *Dow Chem. Co. v. Nova Chemicals Corp. (Canada)*, 803 F.3d 620, 633-35 (Fed. Cir. 2015) is unavailing. (D.I. 89 at 15; Tr. at 56) In *Dow*, the Federal Circuit held that claims were indefinite where the patent did not refer to any method, nor provide any guidance on which method should be used from among multiple known methods that existed; also, the method the expert used was created by him for litigation purposes and was unknown to a POSA. See *Dow Chem.*, 803 F.3d at 634-35. Here, by contrast, the patent refers to a particular standard, the ASTM standard, and a POSA would know to select the ASTM 1243 standard because it is specific to PVC.

4. “a growth in width and length of 0.03% or less when thermoplastic laminate plank is exposed to 90°F and 100% RH”⁸

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| <p>Plaintiff plain and ordinary meaning or “the width and length of thermoplastic laminate plank increases 0.03% or less when thermoplastic laminate plank is exposed to 90°F and 100 RH”</p> |
| <p>Defendants Indefinite</p> |
| <p>Court “the width and length of thermoplastic laminate plank increases 0.03% or less when thermoplastic laminate plank is exposed to 90°F and 100 RH after beginning at ambient room conditions (i.e., 23±2 °C and RH 50±10%)”</p> |

Defendants contend that this term is indefinite because the patents fail to provide any

⁸This term appears in the following asserted claims: ’345 patent claims 8 and 23; ’992 patent claims 6, 12, and 19; ’274 patent claims 7, 13, and 22; and ’741 patent claims 7, 13, and 22.

guidance to a POSA about the specific method that should be used to determine whether a thermoplastic laminate plank practices the claim elements and about how to perform the method. (See D.I. 89 at 7) Plaintiff argues that the patent provides adequate guidance for a POSA to understand the scope of the term with reasonable certainty under *Nautilus*. (See D.I. 98 at 4-8)

The Court agrees with Plaintiff. The patent provides information sufficient for a POSA to reasonably understand the various steps of the method, such as the starting condition, the ending condition, and the length of exposure to those conditions before the necessary measurements are taken. In describing the method, the specification explains that ambient room conditions constitute the starting condition. '345 Patent, col. 10 l. 66 (“Conditions start at ambient room conditions.”). The Court is persuaded by Plaintiff’s expert that ambient room conditions are well-known and understood by a POSA to mean a temperature of 23 ± 2 °C and a relative humidity (“RH”) of $50\pm 10\%$. (D.I. 100 ¶ 28) The patent further makes clear that the ending condition is 100% RH and 90 °F; which is when the final measurements, reflecting any change in the dimension of the plank, are taken. See '345 Patent, col. 10 ll. 46-47 (“These conditions take the product from ambient room conditions to conditions of 100% relative humidity and 90° F.”); see also *id.* at col. 10 ll. 66-67 (“Product expands during change [from ambient room conditions] to 90° F and 100% RH.”). The Court is also persuaded by Plaintiff’s expert that a POSA would not have difficulty in understanding the length of exposure of a test sample in the starting and ending conditions. (See D.I. 99 Ex.9 at 9.1, 10.3; D.I. 100 ¶¶ 29-30)

B. Nilsson Patents

The Nilsson patents relate to a method of assembling resilient floorboards “with a

mechanical locking system.”⁹ ’499 patent, Abstract; *id.* at col. 1 ll. 12-14.¹⁰ The claimed method “includes the step of bending an edge of a floorboard during the assembling.” *Id.* Abstract. According to the patents, the “bending reduces the force required for connection of the edge to another edge of a juxtaposed floorboard.” *Id.*

1. **“bending the first floorboard along at least the outermost surface of the first floorboard edge above the top surface of the second floorboard”/“the first floorboard bends . . . and at a second part of the first edge of the first floorboard, said first device is positioned above said second device”¹¹**

Plaintiff

plain and ordinary meaning, or “bending the first floorboard along at least the outermost surface of the first floorboard edge over the top surface of the second floorboard/the first floorboard bends . . . and at a second part of the first edge of the first floorboard, said first device is positioned over said second device”

Defendants

“bending the outermost surface of the first floorboard edge up from the top surface of the second floorboard so that only a first part of the first floorboard edge is in contact with the second /the first floorboard bends such that the second part of the first edge of the first floorboard is not in contact with the second floorboard”

Court

“bending the outermost surface of the first floorboard edge up from the top surface of the second floorboard so that only a first part of the first floorboard edge is in contact with the second /the first floorboard bends such that the second part of the first edge of the first floorboard is not in contact with the second floorboard”

The parties’ dispute concerns the extent of bending required by the terms. Plaintiff argues that “during bending, the floorboards may contact only a first floorboard edge or they may

⁹The ’581 patent claims the resilient floorboards and the mechanical locking system.

¹⁰As the Nilsson patents share a common specification, the parties cite to just one patent in this group, the ’499 patent. (*See* D.I. 86 at 14 n.8; D.I. 89 at 19 n.3) The Court will do the same, unless otherwise noted.

¹¹The terms appear in claims 1 and 30 of the ’499 patent.

contact more than one part of the floorboard edge.” (D.I. 98 at 15) Defendants contend that Plaintiff’s construction “erases any distinction between the claims of the ’499 patent and the admitted prior art.” (D.I. 89 at 24)

The Court agrees with Defendants. The intrinsic evidence shows the bending feature distinguishes the claimed invention from the prior art. The specification explains how bending reduces the relative amount of force required for assembling the claimed floorboards compared to prior art floorboards:

The bending of the floorboard makes it possible to finalize the ***locking of only a part of the edge of the floorboard***, instead of the whole edge as in the known methods, and as a result the force required to connect the floorboards is considerably reduced. ***Since only a part of the edge of the floorboard is locked the area in the mechanical locking system that is in contact during the connection is reduced*** and consequently the friction created in the mechanical locking is reduced and thereby the force required.

’499 patent, col. 3 ll. 44-52 (emphasis added). Similarly, the prosecution history shows the patentee amended claim 1 to add the term and identified the bending feature to distinguish over prior art. (See D.I. 77-2 Ex. A at 4636, 4646-47)

Bending as detailed in the specification allows only partial contact between locking systems of floorboards during assembly; other parts are not in contact at this stage, as Plaintiff recognizes. (See D.I. 86 at 23; D.I. 98 at 15) Yet, Plaintiff argues that a more pronounced bending would make the area of contact between the floorboards larger when compared to less pronounced bending. (D.I. 98 at 15) That does not contradict Defendants’ construction.

2. “guiding surface”¹²

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| Plaintiff “a surface configured to guide the locking elements into a position where the floorboards are connected by the locking elements and the locking surfaces cooperate” |
| Defendants “a surface configured to cooperate with a corresponding surface to guide the locking elements into a position where the floorboards are connected by the locking elements and the locking surfaces cooperate” |
| Court “a surface configured to guide the locking elements into a position where the floorboards are connected by the locking elements and the locking surfaces cooperate” |

The parties’ constructions differ only in Defendants’ addition of “to cooperate with a corresponding surface.” Plaintiff contends that those additional words introduce vagueness, incorrectly narrows claim scope, and are superfluous. (D.I. 86 at 18) Defendants counter that those words clarify how “a guiding surface works with another surface to perform the guiding function.” (D.I. 102 at 16)

The Court agrees with Plaintiff. Defendants’ construction does not help to clarify the meaning of the term and may confuse the jury, as it seems to imply that the guiding surface of one floorboard is required to interact with, and only with, the guiding surface of an adjacent floorboard during assembly. The patents are not so limited. Defendants recognize that the “corresponding surface” in their construction could be another “guiding surface” or it could be “elements” or “edges” identified by Plaintiff (as supported by the intrinsic evidence). (*See* D.I. 89 at 20; D.I. 102 at 16)

¹²This term appears in the following asserted claims: ’499 patent claims 12-17; ’899 patent claims 11-16; and ’581 patent claims 1, 6-11, 18 and 20.

C. The '625 Patent

The '625 patent “relates to a locking system for mechanical joining of floorboards.” '625 patent, Abstract. The locking system contains a locking element and a locking groove. *Id.* Both the locking element and the locking groove have “operative locking surfaces” that “prevent the floorboards from sliding apart.” *Id.* col. 5 ll. 32-33. The locking system also has “inoperative surfaces” that are spaced from each other and decrease “friction in connection with lateral displacement of joined floorboards along the joint edge.” *Id.* col. 11 ll. 61-64.

1. “inoperative space”¹³

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| Plaintiff “space between inoperative surfaces of the first floorboard and second floorboard when the first and second floorboards are joined together” |
| Defendants Indefinite |
| Court “space between inoperative surfaces of the first floorboard and second floorboard when the first and second floorboards are joined together” |

Defendants contend that this term is indefinite because “the patent provides no indication of how to determine if a space is inoperative.” (D.I. 89 at 28) To Plaintiff, the claim limitation is met “as long as there is a gap, i.e., a lack of contact between opposing [inoperative] surfaces.” (D.I. 98 at 18)

The Court agrees with Plaintiff. The patent provides adequate guidance for a POSA to understand what the term means with reasonable certainty. The specification explains that the locking mechanism involves “operative” and “inoperative” surfaces. '625 patent, col. 11 ll. 54-

¹³This term appears in claim 1 of the '625 patent.

60. The operative surfaces “are intended to engage each other in the laid floor” and “must . . . be manufactured with narrow tolerances.” *Id.* On the other hand, the inoperative surfaces “are spaced from each other” to reduce friction when the floorboards are assembled and “need not be formed with narrow tolerances.” *Id.* col. 11 ll. 50-64. Defendants have failed to show by clear and convincing evidence that a POSA would lack reasonable certainty as to the meaning of the disputed term.

D. The '423 Patent

The '423 patent “relates to a moisture-proof locking system for floor panels which can be joined mechanically.” '423 patent, col. 1 ll. 20-21. Among the components of the floor panels are a “core” and a “surface layer on the upper side of the core.” *Id.* col. 1 ll. 29-32; col. 8 ll. 54-61; col. 9 ll. 51-63; col. 12 ll. 18-25; col. 12 l. 41.

1. “upper surface layer”¹⁴

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| Plaintiff “the upper portion of a layer” |
| Defendants “a layer applied to the top side of the core” |
| Court “a layer applied to the top side of the core” |

The dispute is whether “surface” refers to a surface of a layer, as Plaintiff proposes, or to a surface of the core, as Defendants propose. Plaintiff contends that Defendants’ construction adds ambiguity because it “offers no meaningful way to assess which of the many ‘surface layers’ may be claimed the ‘upper surface layer.’” (D.I. 98 at 20) Defendants contend that there is no

¹⁴This term appears in all the asserted claims of the '423 patent.

intrinsic evidence to support Plaintiff's assertion that "the core has its own 'surface' and 'top side' distinct from the 'surface layer.'" (D.I. 102 at 14) The Court agrees with Defendants. Plaintiff does not point to any intrinsic evidence to show that the term could refer either to "the uppermost layer of a multi-layer core" or "the upper surface of a uni-layer core." (See D.I. 98 at 19)

The patent defines "surface layer" to mean "all layers that are applied to the core closest to the *front side* and that cover preferably the entire front side of the floorboard." '423 patent, col. 3 ll. 49-51 (emphasis added). Front side is defined as the visible surface facing the front and is used synonymously with upper side. See *id.* col. 3 ll. 28-29 ("*visible surface*" of completed, mounted floor panel is called "*front side*") (emphasis added); *id.* col. 14 ll. 48-49 ("the floor panels can however, be oriented with their *front side (upper side)* directed downwards") (emphasis added).

Moreover, the specification consistently uses upper to refer to the upper side of the core, not to the upper side of a layer. See *id.* col. 3 ll. 35-36 ("core has been coated with a surface layer closest to the front side"); *id.* col. 8 ll. 56-57 ("core and a surface layer applied to the upper side of the core"); *id.* col. 12 l. 20 (same); col. 29 ll. 62-63 ("at least one surface layer 31 applied to the upper side of the core"); *id.* col. 33 ll. 16-17 ("a fiberboard core 30 and a surface layer 31 applied to the upper side 33 of the core").

III. CONCLUSION

The Court construes the disputed terms as explained above. An appropriate Order follows.

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

VÄLINGE INNOVATION AB,

Plaintiff,

v.

HALSTEAD NEW ENGLAND CORP.
and HOME DEPOT U.S.A., INC.,

Defendants.

C.A. No. 16-1082-LPS-CJB

ORDER

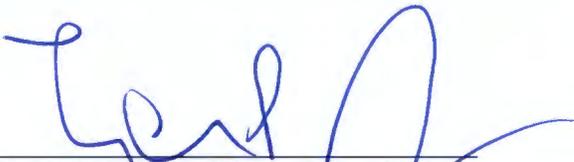
At Wilmington, this **7th** day of **May 2018**:

For the reasons set forth in the Memorandum Opinion issued this date,

IT IS HEREBY ORDERED that the claim terms in this case are construed as follows:

| Claim Term | Court's Construction |
|--|---|
| "axis of curvature" | "a line about which a body is curved" |
| "configured to be spaced apart" | plain and ordinary meaning |
| "flexible polyvinyl chloride" | "polyvinyl chloride containing a plasticizer or another additive that imparts flexibility." |
| "not susceptible to damage caused by moisture" | Indefinite |
| "a molecular weight as reflected by an inherent viscosity of from about 0.88 to about 1.0 inherent viscosity" | "an inherent viscosity of approximately 0.88 to approximately 1.0 inherent viscosity measured using the ASTM D1243 standard" |
| "a growth in width and length of 0.03% or less when thermoplastic laminate plank is exposed to 90°F and 100% RF" | "the width and length of thermoplastic laminate plank increases 0.03% or less when thermoplastic laminate plank is exposed to 90°F and 100 RH after beginning at ambient room conditions (i.e., 23±2 °C and RH 50±10%)" |

| | |
|---|--|
| <p>“bending the first floorboard along at least the outermost surface of the first floorboard edge above the top surface of the second floorboard”/ “the first floorboard bends . . . and at a second part of the first edge of the first floorboard, said first device is positioned above said second device”</p> | <p>“bending the outermost surface of the first floorboard edge up from the top surface of the second floorboard so that only a first part of the first floorboard edge is in contact with the second /the first floorboard bends such that the second part of the first edge of the first floorboard is not in contact with the second floorboard”</p> |
| <p>“guiding surface”</p> | <p>“a surface configured to guide the locking elements into a position where the floorboards are connected by the locking elements and the locking surfaces cooperate”</p> |
| <p>“inoperative space”</p> | <p>“space between inoperative surfaces of the first floorboard and second floorboard when the first and second floorboards are joined together”</p> |
| <p>“upper surface layer”</p> | <p>“a layer applied to the top side of the core.”</p> |



HONORABLE LEONARD P. STARK
UNITED STATES DISTRICT JUDGE