

**UNITED STATES DISTRICT COURT  
DISTRICT OF MINNESOTA**

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3M INNOVATIVE PROPERTIES  
COMPANY & MINNESOTA MINING  
AND MANUFACTURING COMPANY,

Civil No. 01-1781 (JRT/FLN)

Plaintiffs,

**MEMORANDUM OPINION AND  
ORDER CONSTRUING  
DISPUTED CLAIMS**

v.

AVERY-DENNISON CORPORATION,

Defendant.

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Jonathan E. Singer, John C. Adkisson, and Katherine A. Moerke, **FISH & RICHARDSON P.C.**, P.A., 3300 Dain Rauscher Plaza, 60 South Sixth Street, Minneapolis, MN 55402; Juanita R. Brooks, **FISH & RICHARDSON P.C.**, 12390 El Camino Real, San Diego, CA 92130; and Kevin H. Rhodes, **3M INNOVATIVE PROPERTY COMPANY**, 3M Center, Post Office Box 33427, St. Paul, MN 55133, for plaintiffs.

David P. Pearson, **WINTHROP & WEINSTINE, P.A.**, 225 South Sixth Street, Suite 3500, Minneapolis, MN 55402; Roderick G. Dorman and Lawrence M. Hadley, **HENNIGAN, BENNETT & DORMAN LLP**, 601 South Figueroa Street, Suite 3300, Los Angeles, CA 90017; and Jay R. Campbell, **RENNER OTTO BOISSELLE & SKLAR**, 1621 Euclid Avenue, 19<sup>th</sup> Floor, Cleveland, OH 44115, for defendant.

Plaintiff 3M Innovative Properties Company (“3M”) and defendant Avery-Dennison Corporation (“Avery”) both produce, develop and market adhesive-based products for the commercial graphics industry. 3M filed suit against Avery alleging that one of Avery’s products infringes a patent held by 3M. In this opinion, the Court

construes the terms “depressions,” “carrier web,” and “lands,” which are found in the patent.

## **BACKGROUND<sup>1</sup>**

3M’s and Avery’s adhesive-based products include advertising, logos, and signs that adhere to the exterior of trucks, buses, and other large vehicles. Similar to a bumper sticker, an image is printed on a film and backed by a “release liner” which, when stripped off, exposes a pressure-sensitive adhesive. Early versions of these large stickers were difficult to apply properly because they were not easily repositioned and because air frequently became trapped under the product forming bubbles. In order to improve “positionability” of these products and avoid air bubbles, 3M created a patented technology that uses tiny glass beads to allow the film to be moved during the positioning process, and small channels in the adhesive to allow air to bleed out the edges of the film. 3M uses the technology in its line of “Controltac Plus Graphic Films with Comply Performance Adhesive Technology” products (the “Comply products”).

The Comply products use a shaped release liner that imparts a special contour to the surface of the adhesive. The face of the liner contains micron-scale depressions. A mixture of tiny glass beads and light adhesive is spread across the liner, and then topped with a layer of aggressive adhesive and then the film. When the liner is peeled away from the film, the aggressive adhesive and the glass beads remain attached to the film. The face of the liner also contains ridges that, when pressed into and then removed from

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<sup>1</sup> A more detailed factual discussion can be found in the Court’s previous order at *3M Innovative Props. Co. v. Avery Dennison Corp.*, 185 F. Supp. 2d 1031 (D. Minn. 2002).

the aggressive adhesive layer on the back of the film, create micron-scale channels through which trapped air can escape.

Avery designed and sells a competing product line called “EZ Series Fleet Marketing Films” (“EZ Films”). Avery’s EZ Films product is also designed to address the problems of air entrapment and positionability. EZ Films have a special release liner that has a honeycomb pattern of micron-scale ridges surrounding hexagonal lands. When the release liner is pressed into the adhesive sheet, the ridges and lands create air channels. Additionally, micron-scale ink dots are embedded into the liner by depositing raised liquid ink dots on the liner, hardening the dots through a UV curing process, and then re-softening the dots and pressing them into the liner. The ink dots transfer to the adhesive strip when the liner is removed and aid in positionability.

3M asserts that Avery’s EZ Films infringe upon 3M’s Comply products. Specifically, 3M alleges that Avery’s product infringes United States Patent No. 5,897,930 (the “‘930 patent”). 3M brought suit against Avery in 2001, alleging that the release liner on Avery’s EZ Films product infringes upon claim 1 of the ‘930 patent. 3M moved for a preliminary injunction enjoining Avery from making and selling its EZ Films. In considering the motion, the Court construed several terms found in the patent and then, based on this construction, denied the motion because it found that 3M was unlikely to prove that Avery infringed upon its patent. *3M Innovative Proprs. Co. v. Avery Dennison Corp.*, 185 F. Supp. 2d 1031 (D. Minn. 2002).

Following denial of 3M’s motion for a preliminary injunction, the parties conducted and completed discovery. Avery then moved for summary judgment. Based on the claim construction definitions developed in conjunction with the motion for a

preliminary injunction, the Court determined that Avery's EZ Films did not infringe upon 3M's '930 patent literally or under the doctrine of equivalents and, therefore, granted summary judgment. *3M Innovative Props. Co. v. Avery Dennison Corp.*, 2002 WL 31628395 (D. Minn. Oct. 19, 2002).

Following the grant of summary judgment, the parties entered into a stipulation designed to achieve appellate review of the case as quickly as possible. On appeal, the Federal Circuit reversed the claim constructions and remanded for further consideration. *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365 (Fed. Cir. 2003). This case is now before the Court for further claim construction.

## ANALYSIS

Claim 1 of the '930 patent describes:

A carrier web, comprising:

at least one surface that has a multiple embossed pattern having a first embossed pattern and a second embossed pattern, wherein the first embossed pattern forms an array of depressions, wherein the depressions of the first embossed pattern are in the second embossed pattern, wherein the second embossed pattern comprises lands and ridges between the lands, and wherein the height of the ridges over the lands ranges from about 3 to about 45 Fm.

('930 patent, claim 1.) The parties request the Court to construe "depressions," "carrier web," and "lands."<sup>2</sup>

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<sup>2</sup> The parties agree that the Federal Circuit conclusively defined the term "embossed" as "a topography on a web or on tooling having an effective three-dimensional pattern that generates a difference in surface planar dimension in the liner or the tooling," and "multiple embossed" as "two or more embossing patterns are superimposed on the web to create a complex pattern of differing depths of embossing." Additionally, 3M has agreed to accept Avery's

(Footnote continued on next page.)

Claim interpretation begins with the words of the claims themselves and an examination of other intrinsic evidence. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989 (Fed. Cir. 1999); *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Generally speaking, the Court must indulge “a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning.” *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (quoting *Johnson Worldwide*, 175 F.3d at 989). A term’s ordinary meaning, however, must be considered in the context of all intrinsic evidence, namely the claims, the specification, and the prosecution history. *See Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342-43 (Fed. Cir. 2001) (explaining that claim terms must be examined in light of the specification and the prosecution history). A claim term’s ordinary meaning may be narrowed where the intrinsic evidence shows that the patentee distinguished that term from prior art on the basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention. *CCS Fitness*, 288 F.3d at 1366-67. However, because a patentee need not “describe in the specification every conceivable and possible future embodiment of his invention,” limitations in the specification must not be routinely imported into the claims and a party cannot narrow the meaning of a claim term simply by pointing to the preferred embodiment or other structures or steps disclosed in the specification or prosecution history. *Rexnord*, 274 F.3d at 1344; *Johnson*

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(Footnote continued.)

proposed construction of “array” as “an orderly arrangement,” and “ridges” as “an elongated crest or raised strip.” Avery has agreed to accept 3M’s proposed construction of “pattern” as “any formation of embossings that can utilize any theory of geometry, including without limitation, Euclidian geometry and fractal geometry.” The Court adopts these definitions.

*Worldwide*, 175 F.3d at 989-90, 992. Indeed, “if an apparatus claim recites a general structure without limiting that structure to a specific subset of structures,” the court will generally construe the term broadly “to cover all known types of that structure” that the patent disclosure supports. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998).

The Court is free to consult extrinsic evidence such as expert testimony, inventor testimony, dictionaries, technical treatises, and prior art to better understand the technology and help determine the intrinsic meaning of the claims, provided this extrinsic evidence does not lead to a claim construction clearly at odds with the construction mandated by the intrinsic evidence. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999); *Karlin Tech., Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971 (Fed. Cir. 1999); *Vitronics*, 90 F.3d at 1584.

## **I. Depressions**

3M proposes that “depressions” be defined as “a depressed or sunken place or part of the carrier web,” (Pls.’ Claim Constr. Br. at 5), and contends that Avery’s process of softening the carrier web and then pressing the inkdots into the EZ Liner carrier web creates depressions. Avery contends that its EZ Film does not have depressions because the inkdots are inserted into the carrier web leaving a flat surface without hollows or

sunken places.<sup>3</sup> Avery proposes that “depressions” be defined as “a hollow or open area below the surface which is capable of being filled.” (Def’s Claim Constr. Br. at 12.)

The express language of claim 1 dictates that the depressions referred to must be in the surface of the carrier web. (Col. 9, ll. 32-37) (“A carrier web, comprising: at least one surface that has . . . an array of depressions”). Additionally, there can be little dispute that a “depression” is commonly understood to be a lower or sunken area of a surface. *See Random House Webster’s New Unabridged Dictionary* (2d ed. 2001) (defining depression as “a depressed or sunken place or part; an area lower than the surrounding surface”); *Webster’s Third New Int’l Dictionary* (1993) (defining depression as “a place or part that is depressed,” and depressed as “to cause to sink, fall, or assume a lower level, position, point, situation, or attitude”); *Webster’s II New Riverside Dictionary* (1st ed. 1984) (defining depression as “a sunken or depressed area: hollow”).

Avery argues, however, that the definition of depression, as used in claim 1 of the ‘930 patent, must be limited to include only lower or sunken areas that, at the time of embossing or immediately thereafter, are empty of any other material. According to Avery, the patent distinguishes “depressions” from “filled depressions,” requiring that the term be limited, for purposes of claim 1, to empty, or not yet filled, depressions. In support of this argument, Avery points to method claim 12, which recites “a method of using a web of claim 1 as a release liner for a pressure sensitive adhesive, comprising the step of filling the multiple embossed pattern with a pressure sensitive adhesive.” (Col. 10

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<sup>3</sup> The Court notes that the inkdots are removed from the carrier web when the carrier web is stripped from the film, indicating that the ink dot material does not combine with the carrier web material.

ll. 40-43.) According to Avery, if the depressions in claim 1 are not empty, then they cannot be filled using the method of claim 12.

In considering 3M's appeal of this case, the Federal Circuit addressed the argument that because method claim 6 clearly indicated a sequential embossing process, "multiple embossed patterns," as used in claim 1, must be defined as involving a sequential embossing process. The Federal Circuit rejected this argument, stating that "the limitation of serial embossing clearly present in method claim 6 cannot be read into claim 1." *3M v. Avery Dennison*, 350 F.3d at 1372.

The Court finds the instant argument very similar to that presented to the Federal Circuit. Essentially, Avery asserts that method claim 12 indicates a sequential process of depressions being created in one step and then filled in a second, later step. For the same reasons that the Federal Circuit rejected such a process based argument, this Court must also reject Avery's process based argument. Claim 1 describes a structure, which contains depressions. The Federal Circuit has clearly indicated that claim 1 does not describe a product-by-process claim. *3M v. Avery Dennison*, 350 F.3d at 1371-2 (noting that the specification language "neither transforms claim 1 into a product-by-process claim nor even limits the scope of the claim to a serial method of manufacture"), 1374 ("The patent does not limit *how* the embossed pattern, as defined in the specification, is created."). Claim 1 makes no mention of whether the depressions are empty or filled, or when or how the depressions might be filled or emptied. It is clear that the depressions described in claim 1 will often be filled with some material. However, nothing in the intrinsic evidence of the patent requires that a limitation of sequential creation of the depressions followed later by filling the depressions should be included in claim 1. Just



as the Federal Circuit found with respect to method claim 6, the sequential limitation of claim 12 cannot be read into claim 1.<sup>4</sup> The Court therefore concludes that the term “depressions,” as used in claim 1, may be either empty or filled according to any number of processes and uses and is most appropriately defined broadly as “lower, sunken, or depressed areas of the carrier web.”

## II. Carrier Web

3M’s proposed definition of “carrier web” is “generally planar material that carries, can carry or that has carried another material that is releasable from the web.” Avery proposes defining “carrier web” as “sheeting material that carries or can carry another material.” The Court finds that both proposed definitions are too limited.

Claim 1 describes the carrier web only as “at least one surface.” The “at least” language indicates a broad, rather than narrow, definition of carrier web. The language of the specification, which repeatedly emphasizes the flexibility of the claimed invention definition, further supports a broad definition of the term. For example, the specification lists multiple uses for the carrier web, some of which might require a non-sheeting carrier web. (*See* col. 2 ll. 44-55.) Additionally, the embodiments make clear that the carrier web can be “*any* web . . . that is capable of being embossed.” (Col. 3 ll. 58-59 (emphasis added).) The web “can have *any* dimensions required for the sequential formation of a

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<sup>4</sup> Furthermore, the Court concludes that the examples in the specification of depressions being filled in a second step are non-exclusive examples of uses of claim 1 that cannot be imported into claim 1. This conclusion is supported by the variety of uses described in the patent involving depressions that remain empty throughout (*see e.g.* col. 7 ll. 46-63), that are filled and then emptied as part of the manufacturing process (*see e.g.*, col. 2 ll. 18-22), or remain filled (*see e.g.*, col. 2 ll. 27-33).

complex topography.” (Col. 4 ll. 7-9 (emphasis added).) While the carrier web may frequently take the form of a liner sheet that is relatively planar (*see* col. 3 l. 60 – col. 4 l. 6 and col. 7 l. 44 - col. 8 l. 67), the embodiments make clear that a web may be different than a liner (*see* col. 5 l. 5 (distinguishing web 10 and liner 20)). Because, “neither the plain text of the claims, the specification, nor the file wrapper justifies the imposition of [these] negative limitation[s],” *Omega Eng’g v. Raytek Corp.*, 334 F.3d 1314, 1333 (Fed. Cir. 2003), the Court declines to limit the definition of carrier web either to sheeting or to generally planar material.

In the same vein, the Court finds it inappropriate to limit the definition of carrier web to carrying material that is releaseable from the web. Although the patent clearly contemplates such a use, nothing in the claim or specification language requires restricting the carried material to releaseable material. To the contrary, the patent’s reference to the carrier web as the end product (col. 2 l. 27), and emphasis that a “wide variety” of materials may be introduced into the web (col. 2, ll. 22-23), indicates that the carrier web is intended to carry a broad range of materials for any number of purposes. The Court therefore declines to impose a limitation on the carrier web relating to the type of material carried.

Finally, the Court finds that an item that is once a carrier web is always a carrier web. Wallpaper removed from the wall does not cease to be wallpaper, even though it cannot be reused as wallpaper. Similarly, a candy wrapper removed from the candy remains a candy wrapper, although it would be difficult to use it to wrap another piece of candy. Therefore, a carrier web that has been removed from whatever other material it

has been connected to does not cease to be a carrier web – regardless of whether it can or will be reused for its intended purpose.

Based on the above discussion, the Court finds that carrier web is properly defined, in this case, as a “material with at least one surface that carries, can carry, or has carried another material.”

### **III. Lands**

Avery proposes defining the term “land” as “the area of the carrier web between ridges.” 3M proposes a narrower definition of “relatively planar, lower regions on the surface of the carrier web between the ridges.” Avery asserts that the diagrams of 3M’s product demonstrate that the lands are, literally, the areas between the ridges. 3M does not disagree, but contends that the lands are not just empty space, but are intentionally created structures that should be more specifically described in light of the specification.

The Court finds that lands need not be “relatively planar.” On one occasion, the specification describes the lands in figure 3 as “relatively planar lands 27, i.e. large squares that have been depressed from the initial surface of liner.” (Col. 4 line 67.) However, the descriptor “relatively planar” is not used at any other point in the patent, including in connection with the nine other references to lands 27. This leads the Court to conclude that the one reference to relatively planar amounts to no more than an adjectival phrase describing the particular lands in figure 3. Further supporting the Court’s view that the lands need not be “relatively planar” is the patent’s emphasis on the flexible design of the embossing creating the lands, including the depth of the embossed pattern. (Col. 6 ll. 5-62.) Finally, the Court notes that the patent contemplates

depressions created by the first embossing of varying depths. (Col. 3 ll. 16-18.) A very deep depression may, given the total thickness of the carrier web, render the land not relatively planar. In light of the above, the Court defines lands as “areas of the surface of the carrier web between the ridges.”

At the claim construction hearing, the Court indicated that if necessary, it would consider a request from defendant to file a summary judgment motion within a short time period after this ruling. In light of the passage of time and the age of this case, the Court will order the parties to appear within two weeks for a status conference to discuss remaining case management issues.

### **ORDER**

Based on the foregoing, all the records, files, and proceedings herein, **IT IS HEREBY ORDERED** that the following definitions will be applied throughout the remaining proceedings in this matter:

1. **“Embossed”** means a topography on a web or on tooling having an effective three-dimensional pattern that generates a difference in surface planar dimension in the liner or the tooling.
2. **“Multiple embossed”** means two or more embossing patterns are superimposed on the web to create a complex pattern of differing depths of embossing.
3. **“Array”** means an orderly arrangement.
4. **“Ridges”** means an elongated crest or raised strip.

5. **“Pattern”** means any formation of embossings that can utilize any theory of geometry, including without limitation, Euclidian geometry and fractal geometry.
6. **“Depressions”** means lower, sunken, or depressed areas of the carrier web.
7. **“Carrier web”** means material with at least one surface that carries, can carry, or has carried another material.
8. **“Lands”** means areas of the surface of the carrier web between the ridges.

DATED: June 20, 2005  
at Minneapolis, Minnesota.

s/ John R. Tunheim  
JOHN R. TUNHEIM  
United States District Judge