United States District Court,
S.D. Indiana, New Albany Division.

SUD-CHEMIE, INC,
Plaintiff.
v.
CSP TECHNOLOGIES, INC,
Defendant.

No. 4:03-CV-003-SEB-WGH

March 14, 2005.

ENTRY ON CLAIM CONSTRUCTION

BARKER**, J.**

This matter comes before the Court to construe certain patent terms relevant to an underlying infringement action. Declaratory Judgment Plaintiff, Sud-Chemie, Inc. ("SCI"), and Defendant/Cross Claim Plaintiff, CSP Technologies, Inc. ("CSP"), have each proposed constructions for the following terms, which appear in patent claims allegedly infringed by SCI:

1. "channeling agent" as it is used in Claims 1, 4, 7 and 25 of U.S. Patent No. 5,911,937 ("the "7 patent"), Claim 1 of U.S. Patent No. 6,124,006 ("the '006 patent") and Claim 1 of U.S. Patent No. 6,214,255 ("the '255 patent");

2. "hydrophilic" as it is used in Claim 1 of the '255 patent;

3. "passages" as it is used in Claim 1 of the "7 patent;

4. "channels" as it is used in Claim 1 of the '006 patent and Claim 1 of the '255 patent;

5. "channel morphology" as it is used in Claim 1 of the '006 patent;

6. "veined domains of channeling agent" as it is used in Claim 1 of the '255 patent; and

7. "channels for moisture transmission through the polymer" as it is used in Claim 1 of the '255 patent.

CSP is the patent holder. Based on the *Markman* hearing and the parties' briefs, we now enter the following factual and legal findings relating to the construction of the disputed patent language.

I. ***Factual Background***

SCI is a specialty chemical company which develops, markets and produces compositions for industrial packaging and other applications. CSP is a design and engineering company specializing in custom plastic products and systems used in the food, drug, electronic, health care and packaging industries.

At issue in the underlying infringement action are several patents owned by CSP for the design and manufacture of a plastic vial with an internal sleeve composed of a desiccant entrained polymer. In non-industry terms, a desiccant entrained polymer is best described as a moisture-absorbing plastic structure. Products utilizing desiccant entrained polymers are used in the industrial packaging of goods which require a moisture-free environment, such as foodstuffs, pharmaceuticals, medical diagnostics and consumer products.

Three patents are at issue in this claim construction: the "7 patent, the '255 patent, and the '006 patent.

A. *The* "7 patent***.***

The "7 patent, entitled "Desiccant Entrained Polymer," is directed to both the "process" for modifying a plastic material (polymer) so that it is capable of absorbing moisture through solidified interior pathways containing a desiccating (that is, moisture absorbing) agent and the resulting structures. The "7 patent was issued in 1999 and is the "child" of a parent patent application, U.S. Pat.App. 08/424,996 ("the '996 application"), now abandoned.

The "desiccant entrained polymer," from which plastic liners, disks and wrapping sheets are made, consists of a rigid, molded plastic (the polymer) that contains a moisture-absorbing agent (the desiccant), the purpose of which is to absorb any excess moisture internal or external to the container. There are three components to the invention: (1) a polymer base matrix, (2) a desiccant; and (3) a channeling agent. "7 patent, col.6, ll. 25-35' col. 9.

The claimed process for producing a desiccant entrained polymer consists of the following steps: (1) a polymer base is melted; (2) while in a molten state, two materials-a desiccating agent and a channeling agent-are added, blended and mixed together thoroughly; (3) the blended mixture is solidified; and (4) the channeling agent separates from the polymer base and forms solidified pathways or channels throughout the polymer. "7 patent, col 18, ll. 39-52.

The solidified channels act as conduits for transporting moisture from outside the plastic to inside, where the desiccant is entrained. The establishment of channels throughout a desiccant entrained polymer represents the innovation over the prior art. "7 patent, col. 5, ll. 23-30.

Claim 1, in Column 18 of the "7 patent, recites: FN1

FN1. We have italicized the terms requiring our construction-"channeling agent" and "passages"-as they appear in Claims 1, 4, 7 and 25.

1. A process for producing a moisture absorbing desiccant entrained polymer, said process comprising: causing a polymer to assume a molten state, said polymer acting as a moisture barrier in a solidified state;

blending a desiccating agent into the polymer so that the desiccating agent is distributed within the polymer;

blending a *channeling agent* into the polymer so that the *channeling agent* is distributed within the polymer thereby creating a blended mixture; and

solidifying the mixture so that the *channeling agent* forms *passages* in the mixture through which moisture is communicable to desiccating agent entrained within the mixture.

Claim 4 recites:

4. The process of claim 1 wherein the polymer is a moisture barrier that more greatly resists diffusion of moisture thereacross than does the desiccating agent or the *channeling agent*.

Claim 7 recites:

7. The process of claim 1 wherein the desiccating agent has a greater attraction for the *channeling agent* than for the polymer thereby causing a greater concentration of desiccating agent to form in the *channeling agent* than in the polymer.

Claim 25 recites:

25. A process for providing a moisture absorbing insert for a container, said process comprising:

blending a desiccating agent and a *channeling agent* into a polymer thereby forming a mixture, said polymer acting as a moisture barrier in a solidified state; and

solidifying the mixture so that the *channeling agent* forms *passages* in the mixture through which moisture is communicable to the desiccating agent entrained within the mixture.

B. *The* '255 Patent.

The '255 patent, entitled "Desiccant Entrained Polymer," is directed to a "composition" having "veined domains of channeling agents." The '255 patent, like the "7 patent, is a continuation-in-part of application '966, now abandoned. *See* '255 patent, Related U.S. Application Data, p. 1.

Three components are claimed, of which one is a channeling agent. The "channeling agent" in the '255 patent for a composition is defined with greater specificity than the "channeling agent" claimed in the "7 patented process.

The terms requiring our construction-"channeling agent," "hydrophilic," "channels veined domains of channeling agent," and "channels for moisture transmission through the polymer"-are italicized below utilizing the text of Claim 1, as found in Column 18 of the '255 patent, which states:

1. The composition having *veined domains of channeling agents* comprising at least three components:

(a) wherein component A is a polyolefin;

(b) wherein component B is a *channeling agent* consisting of a *hydrophilic* material that is heated above its

melt point during processing of the composition;

(c) wherein component B is substantially separate from component A and forms *channels;*

(d) wherein component C is a desiccating agent;

(e) wherein the volume fraction of component A represents at least about 50% by volume of the total volume of components A, B and C;

(f) wherein the preferential affinity between component B and component C is greater than between components A, and component C;

(g) wherein at least two aggregates are formed, one aggregate is composed of a majority of components A, and the second aggregate is composed of a majority of component B and a majority of component C; and

(h) wherein component B forms *channels for moisture transmission through the polymer*.

C. *The* '006 Patent.

The '006 patent, entitled "Modified Polymers Having Controlled Transmission Rates," is directed both to processes for producing a modified polymer having channels and to the resulting structures. The invention in Claim 1 of the '006 patent is produced according to the same process claimed in the "7 patent, but the claim language is not identical. The entrained material is more broadly described as an "absorption additive," the function of which appears to include absorbing moisture, gasses, acid or oxygen. '006 patent. col. 6, ll. 22-35. CSP contends that it intended the scope of the '006 patent, Claim 1, to relate to broader uses once it discovered that its new invention could be used to absorb more than just moisture in plastics. CSP Resp. Br. at 15. The '006 patent issued in 2000 and is a "grandchild" of the "7 patent.

The terms requiring our construction-"channeling agent," "channels" and "channel morphology"-appear italicized in Claim 1, Column 15 of the '006 patent,, which states:

1. An article of manufacture comprising a shaped article formed by:

(a) mixing at least about 20% by weight of a polymer, between about 10% to about 70% by weight of an absorption additive and at least about 5% by weight of a *channeling agent,* wherein the percent by weight of each component is based on the total weight of the three components;

(b) heating the mixture at a temperature at least above the melt point of the *channeling agent* so that the absorption additive and *channeling agent* are distributed within the polymer;

(c) cooling the mixture to form a shaped article having a *channel morphology* in the polymer wherein the *channels* are composed of the *channeling agent* and wherein the absorption additive is primarily concentrated within the *channeling agent*.

D. *Three Primary Disputes.*

Based on the briefs and arguments emanating from the Markman hearing, we have identified three primary disputes between the parties:

1. ***Whether the definition of "channeling agent" can be narrowed and universally applied:***

The parties agree on a baseline definition of a "channeling agent," to wit: "a material that creates channels throughout the polymer base. Markman Transcript, p. 22. However, SCI maintains that "channeling agent" must be further modified to read:

"a hydrophilic, polar substance immiscible with the polymer base that forms channels throughout the polymer base." SCI Brief, pp. 14-18.

The primary practical effect of the narrower definition proposed by SCI, as we understand it, would limit the universe of suitable materials for channeling agents to those which are the opposite of hydro *phobic* (that is, hydro *philic*) moisture resistant polymers. Markman Transcript, p. 54. SCI urges us to read the term "hydrophilic" into every claimed reference to a "channeling agent," regardless of whether the patent claim explicitly employs that term.

CSP, on the other hand, urges us to adopt what it contends is the term's ordinary meaning, to wit: "a material that is melted and forms passages throughout a polymer base material." This construction flows from the argument that the universe of materials suitable for creating channels is determined by the claimed process itself. That is, the patent allows a person skilled in the art to: (1) select a chemical compound "from a universe of polymers or nonpolymeric materials, based upon their known principles of chemistry;" (2) follow the claimed process (melting, mixing, blending, solidifying); and (3) create a structure full of passages capable of transmitting moisture to an absorbing compound trapped within. Markman Transcript, p. 23.

2. ***The definition of "hydrophilic":***

Borrowing from the prosecution history of two unasserted CSP patents,FN2 SCI proposes "hydrophilic" is properly defined as: "materials which have a solubility in water of at least 1% at 25 (deg.) C and atmospheric pressure."

FN2. The prosecution history of U.S. Patent No. 6,130,263 ("the '263 patent") and U.S. Patent No. 6,080,350 ("the '340 patent"), neither of which is directly at issue in this case, both include a December 1999 paper filed by CSP in which CSP stated: "[w]ith respect to the hydrophilic material, the material has a solubility in water of at least 1% at 25 (deg.) C and atmospheric pressure." *See* SCI Brief at 8; Exhibits I, K, Tab 11.

CSP, however, proposes a construction derived from the specifications of the '255 patent: "having a greater moisture transmission rate than the polymer base material." Further, CSP would allow the term to be so defined only where it actually appears in the text of the asserted claims, specifically, only in Claim 1 of the '255 patent.

3. ***Synonymous terms:***

SCI proposes that the terms "passages," "channels," "channel morphology," "veined domains of channeling agent" and "channels for moisture transmission through the polymer" are synonyms and should be construed similarly in each of the asserted claims. Although CSP briefed its opposition to this proposal, at the Markman hearing it did not object to those terms being regarded as synonyms, except for the fact that the

parties continue to differ in their specific proposed definitions.

From our reading of the patents and from the arguments at the Markman hearing, it is clear that "channels" and "passages" are used interchangeably. CSP defines "passages" as "channels," for example, and SCI proposes a single definition for both terms. We also, therefore, shall consider them synonymous.

Further, regarding the definition of "channels" and "passages," at the Markman hearing CSP conceded that "we agree they [channels] are not porous, they are not voids, they are not holes." Markman Transcript, p. 23. This is consistent with SCI's understanding of how the CSP inventions are distinguishable from both the prior art and SCI's own allegedly infringing product, a point of considerable significance in the underlying infringement lawsuit. Specifically, SCI describes the prior art-the Shigeta patent referred to in column 5, lines 9-23 of the "7 patent-as a porous product which lacks channels. Thus, SCI argues, to the extent that CSP describes its innovation to be the transmission of moisture through solidified channels, it has distinguished channels from pores. Markman Transcript, p. 56.

Assuming the terms are used interchangeably, CSP advocates this ordinary meaning of "passages" as being: "ways of exit or entrance; a road, path, channel, or course by which something passes ." Merriam-Webster Dictionary (10th ed.2001); *http://www.merriamwebster.com* (2 March 2005).

SCI, however, proposes a more detailed definition:

"solid, elongated domains of channeling agent that act as moisture bridges, extending throughout the polymer matrix and terminating in openings at the surfaces of the product." SCI Brief, pp. 20-25.

At the Court-convened *Markman* hearing, the parties presented arguments and exhibits to supplement their claim construction briefs. All issues having now been submitted, we construe the disputed claims in this Entry.

II. ***Legal Analysis***

Claim construction is the interpretation of the patent claims which define the scope of a patentee's rights under a patent and is a question of law exclusively for the court to decide. Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-971 (Fed.Cir.1995), *aff'd* 517 U.S. 370 (1996). Because the scope of a claim is necessarily determined by the language of the claim, claim construction analysis starts with these words. Id. at 976; Teleflex, Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1324 (Fed.Cir.2002). Absent an express indication by the patentee to act as his or her own lexicographer in ascribing special meanings to terms, there exists a "heavy presumption" that a claim term carries its ordinary and customary meaning as understood by one of ordinary skill in the art. Teleflex, 299 F.3d at 1325, 1327.

When courts interpret an asserted claim, it is well-settled that we look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history. Markman, 52 F.3d at 979. Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996).

Among all types of intrinsic evidence, courts have indicated that the specification is the "single best guide to the meaning of a disputed term." *Id*. While a claim must be read in light of its specification, particular

formulations or examples appearing in the specification may not be read to limit the claim. Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc., 261 F.3d 1329, 1338-39 (Fed.Cir.2001); *Amgen.,* 314 F.3d at 1328 (claims are not perforce limited to the embodiments disclosed in the specification). Thus, while an important guide, the specification is not a substitute for, nor can it be used to rewrite, the chosen claim language. SuperGuide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875 (Fed.Cir.2004).

Similarly, a patent's prosecution history may be consulted as a source material, although it may not be used to infer the intentional narrowing of a claim absent the applicant's clear disavowal of claim coverage, such as an amendment to overcome a rejection. *Amgen,* 314 F.3d at 1327.

If the intrinsic evidence does not resolve an ambiguity in a disputed claim, then extrinsic evidence may be considered, if necessary. Vitronics, 90 F.3d at 1582. Extrinsic evidence may be expert or inventor testimony, or dictionary definitions. Markman, 52 F.3d at 980; Texas Digital Systems, Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed.Cir.2002).

A. "*Channeling Agent.*"

As we explain in this section, we are of the view that the term, "channeling agent," as used in the "7 patent claims, is not subject to the limitations proposed by SCI, namely, "hydrophilic" (as defined by SCI), polar and immiscible at room temperature. It also cannot be limited in claim 1 of the '006 patent to a "hydrophilic" material because that invention is not limited to the transmission of moisture or water, a necessary element of hydrophilicity. However, a "channeling agent" is limited to a hydrophilic material in the '255 patent because the claim language specifically says so.

1. *The* "7 patent ***and*** "***hydrophilicity***"

We acknowledge that the *concept* of "hydrophilicity" appears to be presumed, if not actually incorporated, into the "7 patent. After all, the substance which is capable of producing channels-the "channeling agent"-necessarily has an obvious penchant for moisture. The evidence of this is ample. First, the express language of claim 1 informs that a "channeling agent," after following the previous steps in the claimed process, forms "channels" or "passages" through which "moisture is communicable to a desiccating agent entrained within." "7 patent, claim 1, col. 18, ll. 49-52. The communication of moisture implies an affinity (synonym, attraction) for moisture as opposed to an antipathy to it.

Next, the written description of the "7 patent repeatedly refers to the channeling agent as friendly to moisture. Where the embodiments of the invention are described, the channeling agent is repeatedly described as a "moisture bridge" between the exterior of the plastic structure and the desiccant located within. ["7 patent, col. 6, 1.38; col. 8, 1.27; col. 9, 1.66; col. 13, 1. 44 (describing Fig. 4); col. 15, 1. 46.] The claim language and the written description inform the reader that a "channeling agent" is a substance responsible for creating "channels" or "passages" that are capable of transmitting moisture through an otherwise moisture-resistant plastic structure; hence, the implicit requirement of a substance more fond of water than hostile to it. In other words, it is "hydrophilic" in the ordinary meaning of the term: (1) "relating to, or having a strong affinity for water," Merriam-Webster (3rd. ed.); (2) "having an affinity for water, readily absorbing water, relating to such an affinity." Oxford English Dictionary (3rd. ed.)

However, we modify this claim term with some reservation because the patentee himself has not so limited it in the "7 patent. There is not a single inclusion of the term "hydrophilic," in any asserted "7 claim. SCI seizes on the use of the adjective, "hydrophilic" in the "7 written description, as conclusive. After the

inventor identified the compounds ethylene-vinyl alcohol (EVOH) and polyvinyl alcohol (PVOH) as "particularly suited as channeling agents," he elaborated that they are "*hydrophilic* and truly act as a moisture bridge through the hydrophobic polypropylene or polyethylene polymer base because of its relatively fast rate of transmission of moisture thereacross" (italics supplied). Id., col. 6, ll. 60-61; col. 8, ll. 34-35. To limit the claim term, "channeling agent," to a "hydrophilic" material by pointing to a preferred embodiment which is so described, is contrary to Federal Circuit precedent, absent the patentee's clear disavowal of claim coverage somewhere in the file history. *Amgen Inc.,* 314 F.3d at 1328 (stating that precedent is clear that claims are not perforce limited to the embodiments disclosed in the specification); Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1344 (Fed.Cir.2001) (holding that an applicant is not required to describe in the specification every conceivable and possible future embodiment of his invention).

SCI also argues that, by contrasting the hydrophilic channeling agent (of the preferred embodiment) with the hydrophobic polymer base, the inventor's clear intention is expressed that a "channeling agent" includes *only* hydrophilic materials. Yet, the inventor stated in the written description: "It is to be understood that the disclosed embodiments are merely exemplary of the invention that may be embodied in various forms" and "... specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the present invention." ["7 patent, columns 11, ll. 64-67; 12, ll. 3-7.] SCI dismisses this as "boilerplate" language, yet this intention not to limit is as much part of the intrinsic evidence as SCI's argument that the limitations exist because they can be inferred from the evidence as a whole. Thus, the specification may limit the scope of a claim if the patentee has disavowed or disclaimed the scope by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope. *See e.g.* Teleflex, 299 F.3d at 1325. We simply do not find such an unequivocal disclaimer in the intrinsic evidence. Moreover, although we have reviewed the expert affidavit FN3 submitted by SCI, we do not rely on it in this claim construction as we find ample intrinsic evidence on which to base an interpretation of the unambiguous claim term.

FN3. SCI Br., Ex. Q, Declaration of Professor Donald R. Paul. See Docket # 102..

The limitation CSP seeks to avoid, we believe, is not that a channeling agent be considered hydrophilic, as described above, but the requirement that "hydrophilic" be defined as SCI has proposed. Insofar as the term is used in the "7 patent, we agree with CSP. If the "channeling agent" is impliedly a "hydrophilic" substance, then it is "hydrophilic" in the same way and to the extent that the patentee defines it in claim 1 of the '255 patent, which is the only instance in which the term appears in one of the asserted claims. We construe the term "hydrophilic," infra, in part B of this opinion.

2. "*Polar" and "Immiscible at Room Temperature.*"

We find no reason to add the terms "polar" and "immiscible" to the term "channeling agent," because those concepts are clearly expressed in the claim language and the written description of the patents.

SCI demands that the channeling agent be defined as "immiscible" with the polymer base at room temperature based on the specification in the "7 patent:

[a]fter thoroughly blending the several materials together and the mixing process is subsequently stopped, the channeling agent will separate from the polymer base and form veins or channels that act as moisture

communicating passages throughout the polymer.

"7 patent, col. 6, ll. 55-59.

The "7 patent embraces the concept of "miscibility" (that is, the capacity of being mixed) insofar as it clearly describes the "blending" and "mixing" of the three materials-the polymer base material, the desiccating agent and the channeling agent. However, the concept of "immiscibility" is expressed only insofar as the melted mixture eventually solidifies and the channeling agent separates and forms channels. The patentee does not qualify the channeling agent alone as "immiscible," particularly at room temperature.

SCI also urges us to consider the file history of the '255 patent as evidence. In the prosecution of the '255 patent, the original language for claim 1(c) was amended. Claim 1(c) originally read, in part, as follows: "wherein components A and B are immiscible within each other." The Patent Examiner found this claim language not supported by the specification. CSP disagreed and explained that the specification language describing the blending and mixing process FN4 was equivalent to saying that the two components are immiscible within each other. However, CSP subsequently amended the claim language, and, when the patent issued, the adjective "immiscible" does not appear. *See* SCI's Evidence, Ex. M, Tab 12 at 2. There is no compelling reason to import this statement into claim language that already clearly expresses the same concept.

FN4. In column 6 of the '255 patent, lines 55-59 instruct:
"After thoroughly blending the several materials together and the mixing process is subsequently stopped, the channeling agent will separate from the polymer base and form veins or channels that act as moisture communicating passages throughout the polymer."

The requirement that the channeling agent be "polar" is also, according to SCI, derived by inference from the specification. The specification states:

It has also been found advantageous to select desiccating agents having a polarity that causes an infinity [sic] between the desiccant and the channeling agent.

"7 patent, col. 8, ll. 17-19; '255 patent, col. 8, ll. 17-19.

SCI explains that, in order for a polar desiccating agent to be attracted to the channeling agent, the channeling agent itself must be polar. SCI Br. at 19 (citing Fred W. Billmeyer, Jr., *Textbook of Polymer Science* 19 (2nd ed.1971). The claim language simply does not support this limitation. The patents are replete with expressions of the concept of a tension between opposites: to mix and separate ingredients, to attract and repel moisture (in other words, hydrophilic and hydrophobic), to attract one another (polarity). However, the language of patent claims is scrutinized in an effort to define the scope of an invention and the claims do not include the adjective, "polar." Neither do the specifications, for that matter. Therefore, again, we are not persuaded that adding "polar" as a limitation is required by law.

In conclusion, we modify the CSP construction of "channeling agent" to include the implied factor of "hydrophilicity," the definition of which is stated below. Thus, a "channeling agent," as the term is used in the "7 patent means: "a hydrophilic material that is melted and forms passages throughout a polymer base ."

The '006 patent, however, does not require all "channeling agents" to be hydrophilic for the obvious reason that the invention is broader than the "7 claimed inventions. As in the "7 patent, channels are established throughout a polymer matrix by a channeling agent, and further, as in the "7 patent, the channeling agent occupies the channels and acts as a bridge from the surface of the plastic body to the interior. However, unlike the "7 patent, the second entrained material is not limited to a desiccant for absorbing moisture. Instead, the invention refers more broadly to the addition of an "absorption additive" which could eliminate oxygen or acids. ['006 patent, col. 6, ll. 22-35.] The only asserted claim in the '006 patent employs the unmodified term "channeling agent." Thus, when used in conjunction with the broader term, "absorption additive," the term "channeling agent" shall be given the construction proposed by CSP: "a material that is melted and forms passages throughout a polymer base material.

B. "*Hydrophilic.*"

As stated above in the construction of the term "channeling agent," the addition of the adjective, "hydrophilic," is proper only insofar as it expresses a concept that is repeatedly found in the specifications of the three patents. This concept is expressed alternately as the transmission of moisture, the communication of moisture, or the "moisture bridge."

Only claim 1 of the '255 patent explicitly references a "hydrophilic" channeling agent. No precise definition is provided for "hydrophilic," yet there is no need for such; the '255 patent specification (which is identical to the "7 patent and similar in many key respects to the '006 patent) describes the implied hydrophilicity of the channeling agent in two equivalent ways:

(1) The rate at which moisture is transmitted across the channeling agent is greater than the rate at which moisture may be transmitted across the polymer. ['255 patent, col. 13, ll. 28-31; '006 patent, col. 11, ll. 38-40; "7 patent, col. 13, ll. 31-36.]

(2) EVOH and PVOH are hydrophilic and truly act as a moisture bridge through the hydrophobic polypropylene or fast rate of transmission of moisture thereacross. ['255, col. 8, ll. 36-37; "7 patent, col. 8, ll. 34-37.]

These two expressions are consonant with CSP's proposed construction of the term "hydrophilic": "having a greater moisture transmission rate than the polymer base material."

SCI, on the other hand, urges us to import a definition from the prosecution history of two unasserted patents for desiccant entrained polymers: the '263 and '350 patents.FN5 [SCI Evidence, Ex I, Tab 22; Ex. K, Tab 11, respectively.]

FN5. Patent 6,130,263 issued in October 2000 and was a continuation-in-part of U.S. Pat.App. No. 08/611,298. Patent No. 6,080,350 issued in June 2000 and was a continuation-in-part of App. No. 08/812,315, itself a continuation-in-part of App. No. 08/611,298

During the prosecution of those patents, CSP stated that "[w]ith respect to the hydrophilic material, the material has a solubility in water of at least 1% at 25 (deg.)C and atmospheric pressure." SCI contends that these statements control the construction of "hydrophilic" in the patents-in-suit for two interrelated reasons:

(1) because the close kinship between the patents allows the prosecution history of the related patents to be invoked as intrinsic evidence to the claim construction, and (2) because CSP is estopped from obtaining a broader construction during litigation. SCI Br. at 19-20.

"When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation. Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 980 (Fed.Cir.1999); *see also* Biovail Corp. Intern. v. Andrx Pharmaceuticals, Inc. 239 F.3d 1297, 1301 (Fed.Cir.2001).

That patents "7, '255 and '263 are each a continuation-in-part of U.S. Pat.App. '298 is evident on the face of the patents. Patent "7 issued first in 1999, the '263 patent issued in 2000 and the '255 patent issued in 2001. As for the '350 patent, it is a continuation-in-part from U.S. Pat.App. '315, which issued as patent '263. Applying the rule in *Elkay,* the prosecution history regarding a claim limitation-in this case, the limited definition of "hydrophilic"-might apply to the '263 and '255 patents if found in the earlier issued "7 patent, if the earlier patent contained the same claim limitation. However, the limited definition of "hydrophilic" is not found in the file history of the earlier "7 patent and the "7 patent does not employ the term "hydrophilic" in the asserted claims. Assuming *arguendo,* as SCI suggests, the Hekal patents are one, large patent, statements made in the prosecution of *later* patents with *different* claims do not ordinarily apply to *earlier*-issued patents, especially if the earlier patents do not use the contested claim term.

In addition, our review of the '263 and '350 patents makes clear that the "1% solubility in water" language must not have been essential to their patentability because that language appears nowhere in the claims or specifications. Thus, if not necessary to the patentability of the later patents, there is no compelling argument for their application to the earlier issued "7 patent.FN6

FN6. One final consideration regarding the genealogy of the asserted and unasserted Hekal patents: two separately issued patents which begin their lives as a continuation-in-part of the same patent application may belong to a family of patents but they are surely still distinct from one another. After all, one aspect of a continuation-in-part application is that the application, by definition, adds new matter to the previously filed patent application, the nature of which may or may not be critical to the patentability of the claimed invention. Amjur Patents s. 120.

For these reasons, we are not persuaded that the CSP statement to the Patent Examiner during the prosecution of two unasserted patents controls the definition of "hydrophilic" for the earlier "7 patent and related later patents.

The estoppel theory is similarly unpersuasive. SCI states that "[a] patentee having argued a narrow construction for his claims before the United States Patent and Trademark Office (PTO) should be precluded from arguing a broader construction for the purposes of infringement." Coleco Industries, Inc. v. U.S. Intern. Trade Com'n. 573 F.2d 1247, 1257 (C.C.P. A.1978). However, the *Coleco* holding is distinguishable on its facts; there, the patentee had first argued in favor of a narrow claim and then deleted broader language, apparently with the intent to restrict the claim by substituting the narrower language. No such circumstance exists in the prosecution histories for CSP and we decline to apply the *Coleco* rule to import statements from the file histories of unasserted patents in order to restrict the claims of the patents-in-suit.

C. "*Channels*" *and/or* "*Passages,*" *et. al.*

CSP proposes the ordinary meaning of "passages" as "ways of exit or entrance; roads, paths, channels, or courses by which something passes." The parties agree that "passages" and "channels," as used in the patents, have the same meaning. CSP Resp. at 25; Markman Transcript p.

SCI, in contrast, requests the following construction:

"solid, elongated domains of channeling agent that act as moisture bridges, extending throughout the polymer matrix and terminating in openings at the surfaces of the product."

We agree with SCI that most, but not all, of the elements of its definition are supported by the intrinsic evidence, beginning first and foremost with the claim language. However, we see no justification for such a complicated construction. The elements of its definition are already clearly expressed by the inventor and, by substituting this unwieldy definition, the terms will be confusing and replete with redundancies.

CSP stated at the Markman hearing that the channels are not porous, not holes, or voids; they are solidified. Markman Hearing Transcript, p. 23. CSP argued in its brief that, because the asserted claims expressly include the claim language of "solidifying the mixture so that the channeling agent forms passages," to add "solid" to the claim language results in "solid passages that are solidified," a clear redundancy. (CSP Resp. at 25; '7 patent, claims 1 and 25.) We fully agree; without recourse to a dictionary, the verb "to solidify" can only mean "to make solid."

That the "passages" extend "throughout" the polymer matrix is repeated in the written description of the inventions. For example: "channels are established throughout the polymer matrix," ['006 patent, col. 4, l. 40]; "[p]rior to the present invention, the establishment of channels throughout a desiccant entrained polymer has not been known" ["7 patent, col. 5, ll. 23-25]; " '[w]hen hardened into a rigid plastic body, these channels form the moisture communicating passages throughout the plastic body "['255 patent, col. 15, l. 10]. Moreover, CSP states: "[T]he parties have already agreed that a channeling agent at least forms passages throughout the polymer base." CSP Resp. at 26.

We have discussed, *supra,* the requirement that the "channels" or "passages" act as "moisture bridges," as found in the written descriptions of the patents.

Finally, the channels' and passages' "termination at the openings at the surface of the product" is also supported in the written description of the patents, e.g. "[T]he present invention discloses both a structure and a method by which passages are established throughout the polymer matrix that communicate the entrained desiccant particles to the appropriate areas of the exterior of the plastic body in a manner that permits moisture to migrate from outside the plastic structure to interior locations where the desiccant particles are positioned." '7 patent, col. 6, l. 25. In addition, the "passages" in figures 1 and 2, *inter alia,* in the '255 patent "terminate in channel openings at an exterior surface of the plug." '255 patent, col.12, ll. 42-43.

The only adjective proposed by SCI that is unsupported by textual evidence is "elongated"; consequently we shall not include it here.

As we previously indicated in the factual recitation of this order, SCI supports its proposed construction primarily in order to foreclose the possibility that the CSP patents read on a porous structure. Apparently, SCI's product, as well as the Shigeta patent disclosed in the '7 patent as prior art, works because it has pores

as opposed to solidified channels. Markman Hearing Transcript, p. 56; SCI Br. at 21-22. CSP conceded at the Markman hearing that "channels" are "solidified objects" and "they are not porous, they are not voids, they are not holes." Markman Transcript, p. 23.

Because the intrinsic evidence supports SCI's proposed construction for "passages/channels/et. al.," we adopt it in part, despite its superfluous repetitions. We construe the terms "channel" or "passage," or the other synonyms for channeled areas, such as "veined domains of channeling agent and "channel morphology," as:

"solid pathways that extend throughout the polymer base from the exterior surface of the plastic structure into its interior."

Conclusion

For the reasons discussed above, we adopt the following constructions for the disputed terms from the '006, "7 and '255 patents:

Claim Term	Definition
"channeling agent" [Claims 1, 4, 7, 25 of the "7 patent; Claim 1 of the '255 patent]	"a hydrophilic material that is melted and forms passages throughout a polymer base"
"channeling agent" [Claim 1 of the '006 patent]	"a material that is melted and forms passages throughout a polymer base"
"hydrophilic" [Claims 1, 4, 7, 25 of the '927 patent; Claim 1 of the '255 patent]	"having a greater moisture transmission rate than the polymer base material"
"passages," "channels," "channel morphology," "veined domains of channeling agent," "channels for moisture transmission through the polymer" [Claim 1 of the "7 patent; claim 1 of the '006 patent," claim 1 of the '255 patent]	"solid pathways that extend throughout the polymer base from the exterior surface of the plastic structure into its interior"

It is so ordered.

S.D.Ind.,2005.

Sud-Chemie, Inc. v. CSP Technologies, Inc.

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