

IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

PRECISION FABRICS GROUP, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	1:13cv645
	)	
TIETEX INTERNATIONAL, LTD.,	)	
	)	
Defendant.	)	
<hr style="border-top: 3px double #000;"/>		
	)	
PRECISION FABRICS GROUP, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	1:14cv650
	)	
TIETEX INTERNATIONAL, LTD.,	)	
	)	
Defendant.	)	

**MEMORANDUM OPINION AND ORDER**

THOMAS D. SCHROEDER, District Judge.

These consolidated patent cases turn on the parties' disputed construction of the term "intumescent" appearing in the claims of U.S. Patent Nos. 8,796,162 ('162 Patent) and 8,501,639 ('639 Patent) held by Plaintiff Precision Fabrics Group, Inc. ("PFG").<sup>1</sup> PFG alleges that Defendant Tietex International, Ltd. ("Tietex") is infringing the patents, and Tietex has denied infringement and asserted various counterclaims. PFG also moves to strike the

---

<sup>1</sup> Case number 1:13cv645 involves the '639 patent; case number 1:14cv650 involves the '162 patent. The parties have agreed that the claim construction for the '639 patent will apply to the '162 patent, given their similarity. (Doc. 25.) All citations are to the record in case number 1:13cv645, unless otherwise noted.

declaration of Tietex's expert in support of the latter's construction of the term at issue. (Doc. 38.) The court held a claim construction hearing on December 23, 2014. For the reasons stated herein, the court adopts the claim construction advanced by PFG.

## **I. BACKGROUND**

The '162 and '639 patents are both for inventions relating to lightweight fabric that is flame retardant and "intumescent." (Doc. 47-2 at 3 ('162 Patent) col. 1, ll. 15-23; Doc. 37-1 at 2 ('639 Patent) col. 1, ll. 17-24.) The fabric is single-layer, non-woven, and stitch-bonded; this "substrate" is treated with a finish comprising an "intumescent, flame retardant coating." ('162 Patent col. 12, ll. 7-14; '639 Patent col. 12, ll. 47-50). Being lightweight and thermally protective, the invention is suitable for various applications, including furniture, vehicle components, and building components. ('162 Patent col. 1, ll. 15-23; '639 Patent col. 1, ll. 17-24). As PFG presented at the hearing, an asserted advantage of its invention is that, because the intumescent swells and chars upon exposure to flame, it not only retards flame but forms a protective thermal barrier over the holes of the stitch-bonded fabric.

According to the allegations of PFG's amended complaint, Tietex manufactures a fabric with "a single layer of a non-woven, stitch-bonded substrate treated with an intumescent substance,"

infringing both the '162 and '639 patents. (Doc. 27 (Am. Compl.) ¶¶ 14-26.) Tietex denies infringement and asserts counterclaims for a declaration that it has not infringed either of PFG's patents, that both of PFG's patents are invalid, and that neither is enforceable; and for unfair competition and abuse of process.

Pursuant to Local Patent Rule 104.3, the parties have filed a joint claim construction statement, agreeing on the meaning of several terms, including the following:

- a "flame retardant" is "[a] substance that can suppress, reduce, or delay combustion and/or propagation of flame when a substrate is exposed to heat or flame"; and
- a "finish" is "[a] substance that is applied to a substrate."

(Doc. 24 (Joint Claim Construction Statement) at 1.)

The parties ask the court to construe only the claim term "intumescent." (Id. at 2-3.) To define this term, Tietex relies in part on the expert opinion of Dr. Charles A. Wilkie, presented in the form of his declaration. (Joint Claim Construction Statement at 6; Doc. 24-2.) PFG has moved to strike the declaration and to preclude Dr. Wilkie's testimony. (Doc. 38.) However, since Tietex did not present Dr. Wilkie at the claim construction hearing, preclusion is unnecessary, leaving only the motion to strike.

The parties have each filed a claim construction brief, and the motion to strike Dr. Wilkie's declaration has been fully

briefed. Following the claim construction hearing on December 23, 2014, these matters are now ripe for resolution.

## II. ANALYSIS

### A. Legal Standard

Claim construction is a question of law to be determined by the court. Markman v. Westview Instruments, Inc., 517 U.S. 370, 389-91 (1996). The claims of a patent are what define the invention itself, Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc), and are to be given the meaning they "would have to a person of ordinary skill in the art in question," id. at 1313.

A person of ordinary skill in the art "is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Id. The patent's own specifications and claims are intrinsic evidence of what the patent's terms mean. The specification is not just "always highly relevant" to claim construction; rather, it is usually dispositive, being "the single best guide to the meaning of a disputed term." Id. at 1315 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)); see also 35 U.S.C. § 112(a) ("The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which

it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.”). The patent’s specification may rely on the ordinary meaning of a term, but it may also “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. Also relevant as intrinsic evidence is the patent’s prosecution history: the record of the proceedings before the Patent and Trademark Office, which includes the prior art cited during the examination of the patent. Id. at 1317. Although not always clear, the prosecution history can be helpful in understanding whether the inventor has intentionally narrowed the scope of a claim. Id.

Courts may also consider evidence extrinsic to the patent itself. Although sometimes probative of a claim’s meaning, extrinsic evidence is “less significant” and “less reliable” than intrinsic evidence. Id. (quoting C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004)). Several types of evidence fall into the category of extrinsic evidence, each with its own limitations. Dictionaries and treatises can be helpful aids in understanding “the way in which one of skill in the art might use the claim terms,” id. at 1318, although no dictionary definition can “contradict any definition found in or ascertained

by a reading of the patent documents," id. at 1322-23 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1584 n.6 (Fed. Cir. 1996)). The opinions of experts can also be helpful in understanding how one with ordinary skill in the art would understand a term, but they are less useful when they are just "conclusory, unsupported" definitions, or when they contradict the intrinsic evidence. Id. at 1318. Expert testimony must be viewed with caution because it is evidence "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. Moreover, this bias "can be exacerbated if the expert is not one of skill in the relevant art or if the expert's opinion is offered in a form that is not subject to cross-examination." Id.

When a court considers all probative evidence of a claim's meaning, as the Federal Circuit has stated, there is "no magic formula or catechism for conducting claim construction." Id. at 1324. What counts is that the court "attach the appropriate weight" to the evidence from the various sources, acknowledging the value and limitations of each kind of evidence. Id. at 1324.

**B. Expert Opinion of Charles A. Wilkie, Ph.D.**

As a preliminary matter, the court must consider PFG's motion to strike the declaration of Tietex's expert, Dr. Charles A. Wilkie, based on Rule 702 of the Federal Rules of Evidence. (Doc. 38.) PFG argues that while Dr. Wilkie may be qualified as an

expert in the chemistry of flame retardants, he is not qualified in the pertinent art to render an opinion as to the patent claims in this case. Tietex resists the motion on the grounds that Rule 702 allows the court to consider Dr. Wilkie's opinion as to the term "intumescent" from a chemical engineer's perspective irrespective of whether he is a person of skill in the pertinent art. (Doc. 53 at 3-4.)<sup>2</sup>

As mentioned above, patent claims "are analyzed in great part from the perspective of a person of ordinary skill in the art, and testimony explaining the technical evidence from that perspective may be of great utility to the factfinder." Sundance, 550 F.3d at

---

<sup>2</sup> The parties have assumed, without analysis, that the Federal Rules of Evidence apply in this context. Yet, if a court's claim construction ruling is purely a question of law, subject to de novo review by the Federal Circuit, some have questioned what aid an expert would be. See Fed. R. Evid. 702(a) (providing that an expert may testify in the form of an opinion if, among other things, his "scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue"); Peter S. Menell et al., Patent Claim Construction: A Modern Synthesis and Structured Framework, 25 Berkeley Tech. L.J. 711, 815 (2010) (noting that it is an open question whether the Federal Rules of Evidence apply to Markman hearings since the hearings "are not heard by a jury" and suggesting that district courts "tak[e] a liberal approach to applying" the rules of evidence to such hearings). But see Steven M. Bauer, Richard Myrus, Jeremy P. Occek, First Markman, Now Festo: A Simplified Approach to Patent Litigation Trials, 4 Sedona Conf. J. 73, 83 (2003) (arguing that Markman hearings should be governed by the Federal Rules of Evidence). Here, the question appears academic because, as explained infra, the expert lacks at least ordinary skill in the pertinent art. Phillips, 415 F.3d at 1313 (directing courts to determine a claim term's meaning by reference to how one of ordinary skill in the art would understand it); Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356, 1363 (Fed. Cir. 2008) (noting that under Rule 702, as the Federal Circuit applies it to patent cases, an expert is only qualified if he possesses at least ordinary skill in the art).

1361. Under Rule 702, as the Federal Circuit applies it in patent cases, "where an issue calls for consideration of evidence from the perspective of one of ordinary skill in the art, it is contradictory to Rule 702 to allow a witness to testify on the issue who is not qualified as a technical expert in that art." Id. at 1363. The application of this rule in this case is not complex. Dr. Wilkie opined on the level of skill that a person of ordinary skill in the pertinent art would have – and then candidly acknowledged that he lacks this skill.

The pertinent art, as disclosed by the patents in their "Field of the Invention" descriptions, is flame retardant fabrics.<sup>3</sup> In preparing his expert opinion on the meaning of "intumescent" as used in the claims, Dr. Wilkie discovered that he did not know the skill level of a person of ordinary skill in the art of flame retardant fabrics. So, he consulted with two others and gave their opinion as his own. (Doc. 40-3 (Wilkie Dep.) at 121:21–126:11.) In this way, Dr. Wilkie has submitted in his declaration, as his opinion,

that one of ordinary skill in the art would have an undergraduate degree in a discipline such as chemistry, chemical engineering or other related engineering disciplines, materials science, textile engineering, or textile or paper chemistry, or related disciplines. Such person would most likely be employed in the textile

---

<sup>3</sup> At the claim construction hearing, PFG argued that the pertinent art was fabrics or textiles. Regardless of the proper breadth of the art, fabrics are undoubtedly a part of it. Certainly Dr. Wilkie, who defined the pertinent art as "[f]ire-retardant fabrics," thought so. (Wilkie Dep. at 123:22.)



industry but should also have some experience in flame retardancy. I feel that a minimum of two years of experience with textiles and a minimum of two years of flame retardancy experience would likely be required.

(Doc. 24-2 (Wilkie Decl.) ¶ 16.)

It is plain from Dr. Wilkie's declaration that a person of ordinary skill would have some experience working with textiles. During his deposition, Dr. Wilkie was asked about his textile background. He had none. (Wilkie Dep. at 15:7-21, 127:20-25.) Because Dr. Wilkie does not possess at least ordinary skill in the pertinent art, he cannot aid the court in determining how a person of ordinary skill in the art would understand the term "intumescent" in the context of the claims in this case and is therefore not qualified under Rule 702 for purposes of the present motion.

PFG has moved to strike Dr. Wilkie's declaration. But motions to strike apply to pleadings. See Fed. R. Civ. P. 12(f); 5C Charles A. Wright et al., Federal Practice & Procedure § 1380 & n.8.50 (3d ed. 2004 & Supp. 2014). Rather than strike Dr. Wilkie's declaration, which is not a pleading, the court will simply disregard it for claim construction purposes. See DiPaulo v. Potter, 733 F. Supp. 2d 666, 670 (M.D.N.C. 2010) (disregarding, rather than striking, a surreply brief).

**C. Construing "Intumescent"**

The '639 patent claims provide, in relevant part, as follows:

What is claimed is:

1. A fabric consisting of a single layer of a non-woven substrate,  
wherein the non-woven substrate is treated with an intumescent finish comprising one or more flame retardant phosphorous compounds or nitrogen compounds, . . . .

\* \* \*

11. A fabric consisting of a single layer of a non-woven substrate,  
wherein the non-woven substrate is treated with a finish comprising an intumescent, flame retardant coating, . . . .

12. A fabric consisting of a single layer of a non-woven substrate,  
wherein the non-woven substrate is treated with a finish comprising an intumescent, flame retardant coating, . . . .

\* \* \*

17. An article of furniture comprising a fabric consisting of a single layer of a non-woven substrate,  
wherein the non-woven substrate is treated with an intumescent finish comprising one or more flame retardant phosphorous compounds or nitrogen compounds, . . . .

('639 Patent col. 12, ll. 5-9, 47-50, 65-66; col. 13, ll. 1-2; col. 14, ll. 1-5, as amended by Doc. 37-1 (Certificate of Correction) at 1.) The parties have stipulated that the '162 patent's language is sufficiently similar for purposes of this motion. (See Doc. 56 (Claim Construction Hr'g Tr., Dec. 23, 2014) at 7:9-11.)

The parties propose very different definitions of the term

"intumescent." PFG urges a simple definition, arguing that "intumescent" describes a "substance that swells and chars upon exposure to heat or flame." (Joint Claim Construction Statement at 3.) PFG derives this definition from the patents' specifications: In the "Background of the Invention" sections, the patents explain, "Coatings used to absorb heat have been formed from one or more intumescent compounds. Intumescent compounds are compounds that react on contact to flame by charring and swelling." ('162 Patent col. 1, ll. 52-55; '639 Patent col. 1, ll. 54-57).

Tietex urges a more complex definition, defining "intumescent" as

a fire retardant that swells when heated to provide thermal protection to a substrate and, when used on a fabric, has the following four essential components: 1) a carbonific (i.e., carbon compound that has multiple hydroxyl groups ("OH" groups) or other groups that will allow reaction with an acid source[]); 2) an acid source that will react with the carbonific; 3) a spumific (i.e., a material that will generate nonflammable gases when heated); and 4) a skin-forming resin binder that prevents the escape of generated gases when the intumescent composition swells.

(Joint Claim Construction Statement at 3.) Tietex derives its definition in part from a different section of the patents' specifications, which disclose the components of "intumescent system[s]" and explain how the components interact to create the charring and swelling and thus act as a thermal barrier:

The thermal barrier of the fabric is provided by an intumescent finish that chars and swells upon contact to flame.

There are four basic components to any intumescent system: a phosphorous-releasing catalyst, a source of carbon (i.e., a carbonific), a resinous material, and a blowing agent that is a source of nonflammable gas. On exposure to flame, these components interact to form the thermal barrier. . . .

('162 Patent col. 7, ll. 25-31; '639 Patent col. 7, ll. 25-31).

The remainder of the above-quoted paragraph goes on to explain how the "four basic components to any intumescent system" interact to trigger the intumescent reaction.<sup>4</sup>

Tietex contends that the inventors essentially acted as their own lexicographers, displacing the ordinary meaning of "intumescent." For an inventor to act as his own lexicographer, the court must find that the patentee "'clearly set forth a definition of the disputed claim term' other than its plain and ordinary meaning. It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must 'clearly express an intent' to redefine the term." Thorner v. Sony Computer Entm't Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (quoting Helmsderfer v. Bobrick Washroom Equip., Inc., 527 F.3d 1379, 1381 (Fed. Cir. 2008)).

PFG argues that Tietex inappropriately reads the

---

<sup>4</sup> Tietex argues that its proposed construction of "intumescent" only deviates from the "four basic components" in order to provide a more easily understandable definition for the jury. Tietex agreed that it would be amenable, alternatively, to simply limiting the definition of "intumescent" to a verbatim repetition of the four basic components mentioned in the specifications. (See Claim Construction Hr'g Tr. at 93:2-94:19.)

specification definition of an "intumescent system" into the phrases used in the claims themselves, which refer instead to intumescent coatings and intumescent finishes – not systems. The potential problem caused by Tietex's construction is not unique to this case. The Federal Circuit has previously framed the difficult issue of reading claims in light of specifications without warrantlessly reading specifications into the claims:

[T]his court recognizes that it must interpret the claims in light of the specification, yet avoid impermissibly importing limitations from the specification. That balance turns on how the specification characterizes the claimed invention. In this respect, this court looks to whether the specification refers to a limitation only as a part of less than all possible embodiments or whether the specification read as a whole suggests that the very character of the invention requires the limitation be a part of every embodiment. For example, it is impermissible to read the one and only disclosed embodiment into a claim without other indicia that the patentee so intended to limit the invention. On the other hand, where the specification makes clear at various points that the claimed invention is narrower than the claim language might imply, it is entirely permissible and proper to limit the claims.

Alloc, Inc. v. Int'l Trade Comm'n, 342 F.3d 1361, 1370 (Fed. Cir. 2003) (citations omitted); accord Andersen Corp. v. Fiber Composites, LLC, 474 F.3d 1361, 1373 (Fed. Cir. 2007) ("It is true that we have warned against importing limitations from the specification into the claims absent a clear disclaimer of claim scope. We have also recognized the difficulty faced by district courts in trying to walk that tightrope." (citation omitted)).

PFG contends, and the court finds, that the claim term "intumescent" should be accorded its "plain and ordinary meaning": a substance that swells and chars upon exposure to heat or flame. (See '162 Patent col. 1, ll. 52-55; '639 Patent col. 1, ll. 54-57.) The specification lists four basic components of an intumescent "system" and how those components interact to create a thermal barrier by swelling and charring. Had the inventors intended to act as their own lexicographers, the phrase "intumescent system" would have been included in the claims – otherwise there would have been no point in the inventors' departure from ordinary meaning – but it is not.<sup>5</sup>

The claims do in fact limit the composition of the intumescent agent, but not to the level of specificity advanced by Tietex. Instead, where the term "intumescent" is used at all, the composition is merely limited to compounds containing phosphorous or nitrogen. (See, e.g., '162 Patent col. 12, ll. 11-13; '639 Patent col. 12, ll. 8-10 (as amended), col. 12, ll. 50-65, col. 13, ll. 2-20, col. 14, ll. 4-5; accord Doc. 41-11 at 8 ("The following is an examiner's statement of reasons for allowance: The primary reason for allowance is that none of the cited art

---

<sup>5</sup> Tietex also argues that the court should construe the specification's statement that "[t]here are four basic components to any intumescent system" to mean that "there are four basic components to every intumescent system." Whether or not that is a proper understanding of the specification language, the argument is ultimately unpersuasive given that the court finds that the specification phrase "intumescent system" has not been used in or referred to by the patents' claims.

teaches, suggests or otherwise renders obvious treating a stitch bonded fabric comprising cellulosic and polyester fibers with an intumescent composition comprising phosphorous or nitrogen. It is noted that intumescent function not just as flame retardants but as thermal barriers.")). If the "four basic components" language was intended to redefine "intumescent," these claim limitations on the intumescent composition would have been "mere surplusage," already being part of the "intumescent system." Tex. Instruments Inc. v. U.S. Int'l Trade Comm'n, 988 F.2d 1165, 1171 (Fed. Cir. 1993).

This ordinary meaning of the term is also confirmed by the extrinsic evidence presented by both PFG and Tietex. PFG has cited numerous definitions, from both ordinary and technical dictionaries, as well as technical treatises, in support of its proposed construction. (Doc. 36 at 7-8; Doc. 24-1 at 4 nn.1-3.) The publications cited by Tietex, however, similarly support PFG's construction. (See, e.g., Doc. 36 at 8 ("[Intumescence is] [t]he property of a material to swell when heated . . . ." (quoting McGraw-Hill Dictionary of Scientific and Technical Terms 1108 (6th ed. 2003))); id. at 9 ("Intumescence can be described as a fire-retardant technology which causes an otherwise flammable material to foam, forming an insulating barrier when exposed to heat." (quoting G. Camino & S. Lomakin, Intumescent Materials, in Fire Retardant Materials 318 (A.R. Horrocks and D. Price eds., 2008))).)

Expert opinion also supports this construction. PFG's expert, G.A.M. Butterworth, who meets and exceeds Dr. Wilkie's standard of ordinary skill in the art (compare Doc. 24-2 ¶ 16, with Doc. 24-1 ¶¶ 4-10), defines "intumescent" as "a substance that swells and chars upon exposure to heat or flame." (Doc. 24-1 ¶ 15.) Mr. Butterworth opined that the swelling and charring reaction are the defining characteristics of intumescent substances, further noting that there "is no particular explicit or unique formulation required for intumescence. Hence, it is highly unusual and unnecessary to incorporate a specific chemical formulation into a general definition of the term 'intumescent' as would be understood by one of ordinary skill in the art." (Id. ¶ 17.)<sup>6</sup>

Tietex argues that intumescent, being chemicals, are only properly defined by their chemical composition, not their properties. In other words, Tietex contends, chemicals ought to be described as what they are, not how they react. (Doc. 49 at 2-4.) But the prosecution history makes clear that the patent examiner understood that the exact intumescent chemical used in the invention is not defined. (See, e.g., Doc. 37-2 at 351 ("Appealed claim 1 [of Patent '639] does not recite any specific

---

<sup>6</sup> Although the opinion of Tietex's expert, Dr. Wilkie, is not being relied upon for claim construction, it is noteworthy that, after he gave an elaborate definition of an "intumescent," he agreed that the general technical definition of "intumescence" is "the property of a material to swell when heated." (Wilkie Decl. ¶¶ 30, 32.)



materials for the flame retardant agent and intumescent agent.”).)<sup>7</sup> Tietex would be on firmer ground, perhaps, if the patents in fact claimed just a novel chemical, because the claims could possibly fail to “enable” one of ordinary skill in the art to make the invention. 35 U.S.C. § 112(a). But, in this case, the patents’ specifications only refer to intumescent agents manufactured by other companies. The claimed invention is not a particular intumescent chemical, but a combination of a certain fabric with various types of intumescent agents available from other vendors. Moreover, the claims do limit the intumescent chemical to ones containing phosphorous or nitrogen. (See, e.g., ’162 Patent col. 12, ll. 11-13; ’639 Patent col. 12, ll. 8-10 (as amended), col. 12, ll. 50-65, col. 13, ll. 2-20, col. 14, ll. 4-5; accord Doc. 41-11 at 8.)

Tietex has implied that a functional definition of a chemical is improper in patent law, but it has cited no authority for such a proposition. At the hearing, PFG argued that functional claiming is generally proper, and there is support for that proposition. See Manual of Patent Examining Procedure § 2173.05(g) (9th ed. 2014), available at <http://www.uspto.gov/web/offices/pac/mpep/in>

---

<sup>7</sup> Tietex cites to extrinsic evidence (e.g., invention disclosures and original patent applications) that merely repeats the “four basic components” definition of intumescent “systems.” (Doc. 41 at 15-18.) But because each repetition is still limited to *systems* and is no more probative than the specifications themselves, the court is not persuaded beyond Tietex’s similar arguments about the specifications.

dex.html ("A claim term is functional when it recites a feature by what it does rather than by what it is . . . . There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper." (citation and internal quotation marks omitted)). Numerous patent cases specifically approve of functional definitions of chemicals. See, e.g., Lab. Skin Care, Inc. v. Ltd. Brands, Inc., 616 F. Supp. 2d 468, 480 (D. Del. 2009) (construing patent for moisturizing skin care products, where claim term "antimicrobial lotion" was construed functionally to mean "a lotion that effectively inhibits the growth of or kills microorganisms present on the skin"); Proctor & Gamble Co. v. McNeil-PPC, Inc., No. 08-CV-251-BBC, 2009 WL 196826, at \*8 (W.D. Wis. Jan. 26, 2009) (construing patent for teeth-whitening strips, where claim term "gelling agent" was construed functionally to mean "an agent that has the ability to form a gel"). Moreover, the examiner appeared to understand and acquiesce in the functional definition. (See Doc. 41-11 at 8 ("It is noted that intumescent function not just as flame retardants but as thermal barriers.").)

Tietex cites prior related art and other patents in support of its contention that a person of ordinary skill would limit the term intumescent to describing chemicals with the "four basic components." But this argument, too, is unavailing. First, United Kingdom Patent 2,293,572 ("Rowan") lists four components of

intumescent materials but teaches that an intumescent "may" be comprised of these four. (Doc. 41-20 at 8.) Second, U.S. Patent No. 4,061,579 ("Sawko") is offered to show that intumescent always have the four basic components. But Sawko teaches that the composition of agents can be quite variable. (Doc. 41-21 col. 1, ll. 25-44 ("Generally, intumescent coating compositions are formulated from a combination of a variety of constituents which enter into a complex series of reactions when intumesced by heat or fire. . . . It is apparent since the intumescent coatings generally contain a variety of constituents, that the sequence of reactions which takes place is dependent on the decomposition temperature of each ingredient which must possess environmental stability in order to function at the proper temperature.").)

Finally, Tietex argues that the court should construe intumescent narrowly, or else the patents will be invalidated for failing "to enable one of skill in the art to recreate the invention." (Doc. 41 at 22.) Indeed, a canon of claim construction directs courts to avoid invalidating definitions – but Tietex seeks too much of the canon here. See Phillips, 415 F.3d at 1327 ("While we have acknowledged the maxim that claims should be construed to preserve their validity, we have not applied that principle broadly, and we have certainly not endorsed a regime in which validity analysis is a regular component of claim construction."). The canon only applies when, after exhaustion of

all other tools, the disputed claim term remains ambiguous. Id. But, in this case, the ordinary meaning of "intumescent" is clear without use of this narrow canon. And, were the court to rely on the canon, the effort would be fruitless because Tietex has made only conclusory allegations of invalidity. The company has not offered, at this point, any legal reason why PFG's construction would result in invalidity.

The Federal Circuit has explained that "[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). Although not bound to accept either party's proposed construction of "intumescent," and having considered and properly weighted all of the intrinsic and extrinsic evidence presented, the court is persuaded that PFG's construction is correct. The court therefore construes the claim term "intumescent" to describe "a substance that swells and chars upon exposure to heat or flame."

### **III. CONCLUSION**

For the reasons stated,

IT IS ORDERED that PFG's motion to strike (Doc. 38) is DENIED, but the opinion of Dr. Wilkie will not be considered, and the disputed claim term "intumescent" from the '162 and '639 patents is construed to describe "a substance that swells and chars upon

exposure to heat or flame.”

          /s/      Thomas D. Schroeder  
United States District Judge

January 15, 2015