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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

MYCONE DENTAL SUPPLY CO., INC.,

No. C 12-00747 RS

Plaintiff,

v.

CLAIM CONSTRUCTION ORDER

CREATIVE NAIL DESIGN, INC.,

Defendant.

I. INTRODUCTION

This case concerns the patent rights of defendant Creative Nail Design, Inc. (CND) covering radiation-curable SHELLAC nail coatings. CND sent cease-and-desist letters to its competitors Cacee, Inc., Young Nails, Inc., and Nail Systems International (collectively the “joined parties”), each of whose allegedly-infringing products is manufactured by plaintiff Mycone Dental Supply Co., Inc., doing business as Keystone Research & Pharmaceutical (Keystone). Keystone then filed this action seeking a declaratory judgment that its products do not infringe certain claims of CND’s United States Patent Number 6,803,394 (’394 patent), or in the alternative, that those claims are invalid. CND counterclaimed that Keystone and the joined parties are infringing the ’394 patent. Pursuant to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996), and Patent Local Rule 4-3, the parties presented two terms found in the

1 claims of the patents for construction. In consideration of the briefing, the arguments presented at
2 the *Markman* hearing, and for all the reasons set forth below, the disputed terms are construed as
3 follows.¹

4 II. BACKGROUND

5 A. The Invention

6 The '394 patent is entitled "Radiation Curable Nail Coatings and Artificial Nail Tips and
7 Methods of Using Same." Ordinary nail polish can be applied at home, dries with exposure to air,
8 and can be easily removed by wiping the coated nail with an appropriate solvent. The '394 patent
9 concerns "gel" nail polishes, which, although a bit more complicated to apply and remove, have the
10 benefit of being more chip-resistant and longer-lasting than conventional nail polishes. Gels are
11 usually applied by technicians in nail salons and are typically comprised of several different layers,
12 such as a base, color, and top coat. Rather than drying on their own, most gels harden when they are
13 cured under ultraviolet light. They are also more difficult to remove than conventional nail polishes.
14 The gel polishes covered by the '394 patent can be "soaked off" through the use of a solvent with
15 the help of a nail technician, while others must be filed off, which is more harmful to the nail. The
16 claim construction dispute between the parties has to do with chemistry underlying the synthetic

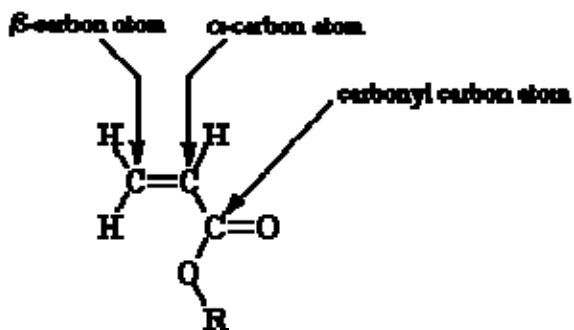
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18 ¹ Nearly a month after the hearing, Keystone moved under Civil Local Rule 7-3(d) for leave to file
19 supplemental material in support of its claim construction brief—deposition testimony of Pamela H.
20 Lilley, a named inventor of the '394 patent. CND had long ago identified Lilley as a person likely
21 to have discoverable information in its Federal Rule of Civil Procedure 26(a) initial disclosures,
22 served on June 28, 2012. *See* Opp. to Mot. for Leave to File Supplemental Material, Ex. A. Yet,
23 Keystone did not identify Lilley as a witness upon whom it would rely during claim construction in
24 the joint claim construction prehearing statement the parties filed under Patent Local Rule 4-3 on
25 November 14, 2012. Nor did it depose Lilley until April 30, 2013, more than four months after
26 claim construction discovery closed and weeks after the claim construction hearing. *See* Case
27 Management Scheduling Order, Dkt. No. 75 and April 10, 2013, Minute Entry, Dkt. 118. Keystone
28 "has not shown that additional briefing on these issues is necessary or appropriate" at this late date.
Moore v. Verizon Commc'ns, Inc., No. 09-1839, 2013 WL 450365 (N.D. Cal. Feb. 5, 2013)
(denying leave to file supplemental material under L.R. 7-3(d)). Nor has it shown why it should be
relieved under Civil Local Rule 16-2(d) from the case management scheduling order requiring claim
construction discovery to have been completed by December 2013. The motion is denied. In
addition, Keystone moves to file under seal Exhibit A to the Declaration of John R. Lane in Support
of the Motion for Leave to File Supplemental Material, consisting of a partial transcript of Lilley's
deposition testimony. As a declaration establishing that Exhibit A contains highly confidential
business information regarding Gel Products and CND's chemical formulations has been provided,
the motions to seal are granted.

1 polymer (or, more commonly, “plastic”) technology of the gel polishes. The parties have agreed
2 upon the proper construction of several claim terms, but still dispute two.

3 B. The Technology

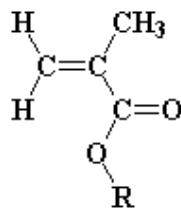
4 Polymers are made of repeating chemical units called monomers. When monomers are
5 reacted under the appropriate conditions, they polymerize, or create a polymer, a chain of monomers
6 forming a larger molecule with repeating structural units. Oligomers and pre-polymers are groups
7 of several monomers linked together, but not so many as to be considered a polymer. In the '394
8 patent, polymerization of the gel polishes is caused by curing them with exposure to actinic
9 radiation, for example visible or ultraviolet light.

10 The resin² compositions claimed in the '394 patent contain (meth)acrylate monomers. The
11 parties have agreed to the construction of the term (meth)acrylate as “a methacrylate, acrylate, or
12 mixtures thereof.” Acrylates and methacrylates both contain vinyl groups (two carbon atoms double
13 bonded to each other: C=C) directly attached to a carbonyl carbon (a carbon atom double-bonded to
14 an oxygen atom: C=O). Acrylates have the general chemical formula CH₂=CHOOR, where R is a
15 generic placeholder for a side chain of any atom or group of atoms. They are represented by the
16 general structure:



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24 Methacrylates are acrylates that have an extra methyl group (CH₃) attached to the α -carbon. They
25 have the formula CH₂=C(CH₃)COOR, and are represented by the following structure:

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27 ² The parties have agreed to the construction of the term resin as “a reactive polymeric compound,
28 which may include monomers, oligomers, and polymers.”



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Acrylates and methacrylates readily polymerize, and in the '394 patent this process is further facilitated by the presence of photoinitiators in the resin blend that catalyze the polymerization reaction upon exposure to light.

In the above structures, any one of a number of other chemical groups can be attached where an R is indicated. One such group is a urethane, which has the basic formula R-O-CONH-R'. It is possible to form monomers or oligomers with (meth)acrylate groups that also include urethane groups. Urethane dimethacrylate (UDMA) is an example of a molecule containing a methacrylate and urethane group. Polyurethanes are a subset of polymers that have urethane units in their repeating structure.

Finally, a hydroxyl group is a chemical group consisting of an oxygen atom bonded to a hydrogen atom (OH) that is normally connected to a carbon atom in an organic molecule. They are chemically reactive functional groups that can form bonds with other molecules when two or more molecules are combined. During such reactions, the hydrogen atom of an OH is removed, leaving behind an oxygen atom that bonds to another atom in the newly formed larger molecule. This bound oxygen atom is called an "hydroxyl residue," which originated as an OH group on one of the constituents that reacted to form a larger molecule. Alcohols containing multiple hydroxyl groups are called polyols, of which there are hundreds, if not thousands, of different types. Urethanes can be created by reacting polyols with other chemical compounds, or formed by other chemical reactions not involving polyols.

III. LEGAL STANDARD

Claim construction is a question of law to be determined by the Court. *Markman*, 52 F.3d at 979. "Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim."

1 *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (quoting *Renishaw PLC v. Marposs*
2 *Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). Accordingly, a claim should be
3 construed in a manner that “most naturally aligns with the patent’s description of the invention.” *Id.*

4 The first step in claim construction is to look to the language of the claims themselves. “It is
5 a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the
6 patentee is entitled the right to exclude.’” *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water,*
7 *Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). A disputed claim
8 term should be construed in a manner consistent with its “ordinary and customary meaning,” which
9 is “the meaning that the term would have to a person of ordinary skill in the art in question at the
10 time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415
11 F.3d at 1312-13. The ordinary and customary meaning of a claim term may be determined solely by
12 viewing the term within the context of the claim’s overall language. *See id.* at 1314 (“[T]he use of a
13 term within the claim provides a firm basis for construing the term.”). Additionally, the use of the
14 term in other claims may provide guidance regarding its proper construction. *Id.* (“Other claims of
15 the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment
16 as to the meaning of a claim term.”).

17 A claim should also be construed in a manner that is consistent with the patent’s
18 specification. *See Markman*, 52 F.3d at 979 (“Claims must be read in view of the specification, of
19 which they are a part.”). Typically, the specification is the best guide for construing the claims. *See*
20 *Phillips*, 415 F.3d at 1315 (“The specification is . . . the primary basis for construing the claims.”);
21 *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“[T]he
22 specification is always highly relevant to the claim construction analysis. Usually, it is dispositive;
23 it is the single best guide to the meaning of a disputed term.”). This, however, “does not mean that
24 everything expressed in the specification must be read into all the claims.” *Raytheon Co. v. Roper*
25 *Corp.*, 724 F.2d 951, 957 (Fed. Cir. 1983). In limited circumstances, the specification may be used
26 to narrow the meaning of a claim term that otherwise would appear to be susceptible to a broader
27 reading. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341

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1 (Fed. Cir. 2001); *Phillips*, 415 F.3d at 1316. Precedent forbids, however, a construction of claim
2 terms that imposes limitations not found in the claims or supported by an unambiguous restriction in
3 the specification or prosecution history. *Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1347 (Fed.
4 Cir. 1998) (“[A] court may not import limitations from the written description into the claims.”);
5 *Comark Commc’ns., Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998) (“[W]hile . . .
6 claims are to be interpreted in light of the specification, it does not follow that limitations from the
7 specification may be read into the claims.”); *SRI Int’l v. Matsushita Elec. Corp. of Am.*, 775 F.2d
8 1107, 1121 (Fed. Cir. 1985) (en banc) (“It is the claims that measure the invention”) (emphasis in
9 original). A final source of intrinsic evidence is the prosecution record and any statements made by
10 the patentee to the United States Patent and Trademark Office (PTO) regarding the scope of the
11 invention, if in evidence. *See Markman*, 52 F.3d at 980.

12 In most situations, analysis of this intrinsic evidence alone will resolve claim construction
13 disputes. *See Vitronics*, 90 F.3d at 1582 (Fed. Cir. 1996). The court may also, though, consider
14 extrinsic evidence, such as dictionaries or technical treatises, especially if such sources are “helpful
15 in determining ‘the true meaning of language used in the patent claims.’” *Phillips*, 415 F.3d at 1318
16 (quoting *Markman*, 52 F.3d at 980). Extrinsic evidence “consists of all evidence extrinsic to the
17 patent and prosecution history, including expert and inventor testimony.” *Id.* at 1317. All extrinsic
18 evidence should be evaluated in light of the intrinsic evidence. *See id.* at 1319. Ultimately, while
19 extrinsic evidence may aid the claim construction analysis, it cannot be used to contradict the plain
20 and ordinary meaning of a claim term as defined within the intrinsic record. *See Phillips*, 415 F.3d
21 at 1322-23. Once the proper meaning of a term used in a claim has been determined, that term must
22 have the same meaning for all claims in which it appears. *See Inverness Med. Switzerland GmbH v.*
23 *Princeton Biomeditech Corp.*, 309 F.3d 1365, 1371 (Fed. Cir. 2002).

24 In order for a patent to be valid, 35 U.S.C. § 112(b) (formerly § 112 ¶2) states that “[t]he
25 specification shall conclude with one or more claims particularly pointing out and distinctly
26 claiming the subject matter which the inventor or a joint inventor regards as the invention.” The
27 Federal Circuit has explained that this provision requires an applicant to set forth his invention “with

No.	Claim Term	CND's Proposed Construction	Keystone Proposed Construction
1.	Polymerizable polyol modified (meth)acrylate resin	Resin capable of being polymerized comprising a monomer, oligomer or polymer with at least one acrylate or methacrylate group and at least two hydroxyl residues	Indefinite as a whole and indefinite because it contains the term "polyol modified"

The core of this first dispute is the meaning of the term "polyol modified." Keystone argues that "polyol modified" should be construed independently. CND urges the construction of the term "polyol modified" only as a part of and in the context of the larger claim term "polymerizable polyol modified meth(acrylate) resin." Keystone notes that "[u]ltimately, it does not matter whether 'polyol modified' or the larger term is construed because, either way, [it prevails on its argument that] claim 13 is indefinite." Given Keystone's contention and the Federal Circuit's instruction that "the context in which a term is used in the asserted claim can be highly instructive," the larger claim term is the subject of this construction. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005).

CND proposes that "polymerizable polyol modified (meth)acrylate resin" be given the construction, "resin capable of being polymerized comprising a monomer, oligomer or polymer with at least one acrylate or methacrylate group and at least two hydroxyl residues." Keystone argues that it is indefinite, which would render claim 13 invalid. As discussed above, the parties have agreed to define (meth)acrylate as "methacrylate, acrylate, or mixtures thereof" and resin as "a reactive polymeric compound, which may include monomers, oligomers, and polymers." The parties further allow that the word polymerizable is well-known in the art and should be accorded its plain and ordinary meaning, "capable of being polymerized."

Keystone bears the burden of persuasion and production to show with clear and convincing evidence that a claim is indefinite. It has supplied a declaration from Dr. Christopher N. Bowman, a Distinguished Professor of Chemical and Biological Engineering at the University of Colorado, who provides an expert opinion that "it is difficult to determine what the term 'polyol modified' means."

1 Declaration of Dr. Christopher N. Bowman in Support of Plaintiff and Third-party Defendants’
2 Responsive Claim Construction Brief (Bowman Decl.), Dkt. 108-3, ¶28. Nonetheless, he provides
3 a proposed construction, albeit one that differs from the construction advanced by CND. *See*
4 Bowman Decl. ¶26 (“one possible interpretation of the language ‘a polyol modified methacrylate
5 resin’ is a resin containing a methacrylate base molecule that was subsequently modified by adding
6 polyols to that methacrylate structure”). A term will not be held indefinite, however, “merely
7 because it poses a difficult issue of claim construction” or because it is susceptible to more than one
8 possible construction. *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1372, 1375 (Fed.
9 Cir. 2001); *see also Modine Mfg. Co. v. U.S. Int’l Trade Comm’n*, 75 F.3d 1545, 1557 (Fed. Cir.
10 1996) (“when claims are amenable to more than one construction, they should when reasonably
11 possible be interpreted to preserve their validity”). Courts “engage in claim construction every day,
12 and cases frequently present close questions of claim construction on which expert witnesses, trial
13 courts, and even the judges of [the Federal Circuit] may disagree.” *Id.*

14 The simple fact that Bowman, Keystone’s own expert, is able to provide a proposed
15 construction of the term weighs against finding it indefinite, because it indicates that the claim is
16 “amenable to construction.” *Id.* Keystone’s briefing proceeds to consider and reject Bowman’s
17 proposed construction as “not making sense in view of the specification” of the patent. Keystone
18 Brief, Dkt. 108, 16. This setting up then striking down a straw man construction does not constitute
19 evidence of indefiniteness. Whether a hypothetical construction is mentioned or alluded to in the
20 patent’s specification or prosecution history does not matter.

21 Keystone next argues that the term is indefinite because the ’394 patent’s specification and
22 prosecution history does not provide a person of ordinary skill in the art with any guidance on what
23 it means. The term “polymerizable polyol modified (meth)acrylate resin” never appears in the
24 specification. It mentions “polyol modified (meth)acrylate resin” only once, stating “[t]he radiation
25 curable gel coating may comprise a polyol modified (meth)acrylate resin or a (meth)acrylate
26 urethane resin.” Declaration of Christopher T. La Testa in Support of Defendant Creative Nail
27 Design, Inc.’s Opening Claim Construction Brief, Ex. A (the ’394 patent), Dkt. 98-2, col. 5, ll.62-

1 64. Keystone further points out that, of the forty examples of nail coating compositions provided in
2 the specification, none is identified as being “polyol modified.” Keystone additionally faults CND
3 for failing to introduce any extrinsic evidence, such as textbooks, journal articles, or chemical
4 dictionaries, defining the term. None of Keystone’s arguments, however, amount to clear and
5 convincing evidence that the term is “insolubly ambiguous, and no narrowing construction can
6 properly be adopted.” *Exxon*, 265 F.3d at 1375.

7 Keystone next argues that, given what it views as the ’394 patent’s failure to define
8 “polymerizable polyol modified (meth)acrylate resin” as a structural limitation on the claim, it must
9 be a product-by-process limitation instead, intended to cover a resin that is manufactured by
10 modifying some compound with polyols, rather than the resin itself. A product-by-process claim is
11 ““one in which the product is defined at least in part in terms of the method or process by which it is
12 made.”” *See Smithkline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1315 (Fed. Cir. 2006)
13 (quoting *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 158 n.* (1989)). If the
14 disputed term is a product-by-process, Keystone maintains that it is still indefinite, because the
15 patent does not indicate what type of “polyol modification” reaction is being claimed. Again,
16 however, Keystone identifies a variety of possible constructions for the term as a product-by-
17 process limitation and proceeds to assert that the specification does not particularly identify which is
18 being claimed.

19 CND denies that the term is a product-by-process limitation, and has never argued that it is.
20 Its contends that claim 13 is a method claim, for “applying a soak-off nail coating composition to a
21 coated nail,” in which one of the steps is to apply a particular resin—a “polymerizable polyol
22 modified (meth)acrylate resin.” The language of the claim itself supports this position. It describes
23 “applying a composition comprising a polymerizable polyol modified (meth)acrylate resin to the
24 coated nail” as one of the steps of the claimed method. There is no claim language reciting any
25 process or method of manufacturing “polymerizable polyol modified (meth)acrylate resin.” Rather,
26 it is described in terms of its structure as the specific substance that is applied to the nail during a
27 particular step of applying gel nail polish to a nail. Where a claim “limitation, read in context,

1 describes the product more by its structure than by the process used to obtain it,” it is “best
2 characterized as [a] pure product claim[.]” rather than a product-by-process claim. *See Hazani v.*
3 *ITC*, 126 F.3d 1473, 1479 (Fed. Cir. 1997). Not only does the claim language describe the term as a
4 product, rather than a product-by-process, the conclusion that it is a structural limitation is further
5 supported by the broader context of the ’394 patent and file history, which contain nothing
6 discussing any process by which the claimed resin is made. *See* ’394 patent. Furthermore, CND’s
7 reply expert, Dr. Stephen Spiegelberg (who holds a Ph.D. in chemical engineering from the
8 Massachusetts Institute of Technology and is the president and co-founder of Cambridge Polymer
9 Group, Inc.), has explained why this would be the case—the inventors were claiming the use of
10 known resins, not a process by which such resins are made. *See Declaration of Dr. Stephen*
11 *Spiegelberg in Support of Defendant Creative Nail Design, Inc.’s Claim Construction Reply Brief*
12 (Spiegelberg Decl.), Dkt. 113-3, ¶31.³ Given that the term is a structural limitation, it is not
13 necessary to consider whether, if the term was a product-by-process limitation, it would be
14 indefinite as such.

15 CND concedes that the term is not defined in the specification, but notes that there is no
16 requirement that the specification define claim terms in order for them to be definite. Even where a
17 term is not defined in the patent, and there is no extrinsic publication that defines it, where “the
18 components of the term have well-recognized meanings, which allow the reader to infer the
19 meaning of the entire phrase with reasonable confidence,” it will not be found to be indefinite. *See*
20 *Bancorp Servs., LLC v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1372 (Fed. Cir. 2004). It argues that
21 support for its proposed construction of “polymerizable polyol modified (meth)acrylate resin” as a
22 “resin capable of being polymerized comprising a monomer, oligomer or polymer with at least one
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25 ³ Keystone objects to the Spiegelberg declaration because it was supplied for the first time on reply,
26 contending that it does not rebut arguments made in Keystone’s brief, but rather constitutes late-
27 disclosed evidence that CND should have raised in its opening brief. Keystone does not, however,
28 request permission to file a sur-reply responding to any supposedly new evidence it presents. Upon
review, the Spiegelberg declaration is responsive to Keystone’s brief and the declaration testimony
of its expert, Bowman. The objection is therefore overruled.

1 acrylate or methacrylate group and at least two hydroxyl residues” can be found in both the ’394
2 patent specification and its prosecution history.

3 First, as Keystone has acknowledged, the specification explicitly states that the coatings are
4 comprised of “polyol modified (meth)acrylate resin.” ’394 patent, col. 5, ll. 63-64. Even if it does
5 not define this substance, it provides several examples of such compositions: Example 9 in Table 3
6 (UDMA) as well as all of the examples in Tables 4 through 6, which include a (meth)acrylated
7 polyether urethane resin further defined in the specification as optionally a methacrylate resin
8 containing polyether, polyester, polybutadiene and/or polycarbonate groups. *See* ’394, Tables 3-6;
9 col. 15, ll. 35-36. The Spiegelberg declaration opines that a person of ordinary skill in the art would
10 understand the resin disclosed in Example 9 of Table 3 and the examples containing (meth)acrylated
11 polyether urethane resin in Tables 5 and 6 to be “polymerizable polyol modified (meth)acrylate
12 resins,” despite the fact that they are not explicitly identified as such. *See* Spiegelberg Decl., ¶23.
13 He is silent as to the examples in Table 4.

14 Keystone protests that the invention is foreclosed from arguing that Example 9 in Table 3 is the
15 invention, because it is the exact same thing as Examples 7 and 8, which constitute prior art. The
16 ’394 patent is the fifth in a series of continuation-in-part applications. Therefore, the invention it
17 claims must be limited to only that captured by the fifth application, which Examples 7 and 8 of
18 Table 3 were not. Keystone additionally notes that the examples in Table 4 are not described as
19 soak-off.

20 “The statutory requirement of particularity and distinctness in claims is met only when [the
21 claims] clearly distinguish what is claimed from what went before in the art and clearly
22 circumscribe what is foreclosed from future enterprise.” *Halliburton*, 514 F.3d at 1249. At the
23 *Markman* hearing, counsel for CNL conceded the similarity between Examples 7, 8, and 9 in Table
24 3. Counsel argued, however, that the unique invention of the fifth continuation-in-part application is
25 that the gel polishes are soak-off, while the prior art taught file-off gel polishes. Therefore, while
26 the prior art, in Examples 7 and 8 of Table 3, may have identified the same resin described in
27 Example 9 of that table, it was used in combination with other ingredients to form inventions that

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1 cannot be soaked off. CND therefore maintains that the presence of Example 9, which appears only
2 in the fifth application, supports their construction despite its similarities to examples described by
3 the prior art. CND also points to other prior art disclosing known structures of polyol modified
4 (meth)acrylate resins which conform to its proposed construction (having methacrylate groups and
5 at least two hydroxyl residues) in support of its argument that a person of ordinary skill in the art
6 would understand the term in the same manner for which CND advocates.

7 The patent prosecution history supports CND’s position regarding the examples and its
8 proposed construction. While the examiner rejected some claims for indefiniteness, she never
9 rejected Claim 13 on that ground. *See* December 4, 2003 Office Action, Dkt. 98-15. Of course,
10 having issued, the patent is presumed to be valid. *See* 35 U.S.C. § 282. Furthermore, indicating that
11 she understood the term to be patentable, the examiner used it in the notice of allowability,
12 remarking that the prior art failed to “teach a method of increasing the soak-off characteristics
13 providing a nail coating comprising . . . a polymerizable polyol modified methacrylate resin.” *See*
14 *Notice of Allowability*, Doc. 113-2.

15 Ultimately, “[i]f the meaning of the claim is discernible, even though the task may be
16 formidable and the conclusion may be one over which reasonable persons will disagree, [the Federal
17 Circuit has] held the claim sufficiently clear to avoid invalidity on indefiniteness grounds.” *Exxon*
18 *Research & Eng’g Co. v. United States*, 265 F.3d 1372, 1375 (Fed. Cir. 2001). Although the term
19 may be subject to more than one possible interpretation, CND has introduced sufficient evidence
20 that a person of ordinary skill in the art would interpret “polymerizable polyol modified
21 (meth)acrylate resin” to mean a “resin capable of being polymerized comprising a monomer,
22 oligomer or polymer with at least one acrylate or methacrylate group and at least two hydroxyl
23 residues.” This construction is supported by the patent specification, the prosecution history, the
24 prior art, and the extrinsic evidence of Spiegelberg’s expert opinion. CND’s proposed construction
25 is therefore adopted.
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B. Claim 14

Claim 14 states, in full:

14. The method of claim 13 wherein the step of applying a composition comprises providing methacrylate urethane resin.

No.	Claim Term	CND’s Proposed Construction	Keystone Proposed Construction
2.	Methacrylate urethane resin	Resin comprising a monomer, oligomer, or polymer with at least one methacrylate group and at least one urethane group	A methacrylate based resin with urethane functional groups or a urethane based resin with methacrylate functional groups

CND proposes that the term “methacrylate urethane resin” be construed as a “resin comprising a monomer, oligomer, or polymer with at least one methacrylate group and at least one urethane group.” The position Keystone originally took in the parties joint claim construction statement was that the term “methacrylate urethane resin” was indefinite. It later changed its position and now contends that the term should be construed to mean “a methacrylate based resin with urethane functional groups or a urethane based resin with methacrylate functional groups.” As discussed above, both parties agree that a resin is “a reactive polymeric compound, which may include monomers, oligomers, and polymers.” *See* Joint Claim Construction Statement, Dkt. 88, at 2.

CND argues that methacrylate urethane resins are a class of compositions well-known in the art to have methacrylate groups and urethane groups, therefore one of ordinary skill in the art would understand the term to refer to the known chemical structure described in its proposed construction. CND presents scientific articles that provide examples of methacrylate urethane resins conforming to its proposed construction—containing at least one methacrylate and one urethane group. *See, e.g.,* Assumption et. al., *Photopolymerization of Urethane Dimethacrylates Synthesized Via a Nonisocyanate Route*, Polymer 44 (2003) 5131-36, Dkt. 98-12; Ledru et al., *Poly(urethane methacrylate) Thermosetting Resins Studied by Thermogravimetry and Thermomechanical Analysis*, Journal of Thermal Analysis and Calorimetry 68 (2002) 767-74, Dkt. 98-21; Sterett, et al., *Effect of Molecular Structure on the Mechanical Properteis of Modified Methacrylate Resins*, Journal of Elastomers and Plastics 18 (1986) 187-94, Dkt. 98-22. Furthermore, the ’394 patent itself

1 incorporates by reference several prior art references that demonstrate the known state of the art
2 with regard to such resins. The Giuliano (U.S. Patent No. 4,682,612) and Cornell (U.S. Patent No.
3 4,704,303) patents, each cited in the specification of the '394 patent, both disclose urethane
4 methacrylate resins that have one methacrylate and urethane group.

5 In addition, the Usifer patent (U.S. Patent No. 5,484,864) issued more than 8 years before
6 the '394 patent, in 1996, and discloses the structure of urethane methacrylates and a variety of
7 manners in which they can be synthesized. *See* Dkt. 98-26. Examples from the Usifer patent
8 contain at least one urethane and one methacrylate group. *See id.* While the urethane methacrylate
9 compositions of the invention described in Usifer are formed by reacting a urethane with a
10 methacrylate, nothing in that patent refers to or defines the claimed resin in the way that Keystone
11 proposes it should be construed, as being methacrylate-based or urethane-based. *See id.* CND's
12 expert opines that one of ordinary skill in the art would read Usifer to understand it was disclosing
13 urethane methacrylate resins that structurally contain at least one urethane group and at least one
14 methacrylate group. *See Spiegelberg Decl.* ¶43.

15 Keystone faults CND's proposed construction for being too broad. As it does not require
16 any specific base, but rather covers any resin, whether its base compound is a urethane, a
17 methacrylate, or some other compound, as long as it contains at least one methacrylate and one
18 urethane functional group. The claim term may, however, encompass many products. As long as
19 the proposed construction "provide[s] sufficient clarity about the bounds of the claim to one skilled
20 in the art," such breadth is not necessarily problematic. *Exxon*, 265 F.3d at 1373.

21 In support of its proposed construction, Keystone relies on the compound-naming
22 convention described by its expert, Bowman. Although Bowman admits there are no "rigorous
23 rules" for naming polymers or resins, he states that resins typically have names that reflect a base
24 compound and significant modifications to that compound. *See* Bowman Decl. ¶¶16, 36. Applying
25 this naming convention, Keystone argues that a "methacrylate urethane resin" would be understood
26 by a person of ordinary skill in the art to be a compound with a urethane base that has been
27 modified, through a chemical reaction, to include methacrylate functional groups, or a compound

1 with a methacrylate base that has been modified, through a chemical reaction, to include urethane
2 functional groups. *Id.*

3 This argument suffers from a number of fatal flaws. First, it is inconsistent with the patent
4 specification and file history, which contain nothing suggesting that methacrylate urethane resins
5 should be defined by the organic molecule upon which they are based. Second, it contradicts the
6 understanding of the state of the art at the time of the invention describing that methacrylate
7 urethane resins can be synthesized from many different starting molecules. *See Sterett et al.*, Dkt.
8 98-22 at Table 2.

9 Finally, and perhaps most importantly, the naming convention advocated by Bowman is
10 unpersuasive because it does not support the very construction it advances. According to Bowman's
11 proposed naming convention, a "methacrylate urethane resin" would only describe a urethane-based
12 molecule subsequently modified by a methacrylate. Bowman Decl. ¶17. The term would not
13 encompass a methacrylate base that has been modified, through a chemical reaction, to include
14 urethane functional groups, although Keystone's proposed construction does just that. In addition,
15 Keystone itself relies on a Polymer Science Dictionary definition of a "urethane-methacrylate" as
16 "based on a urethane with terminal methacrylate groups." *See* Keystone Brief, Dkt. 108, 31. Under
17 Bowman's naming convention, however, the term "urethane-methacrylate" would describe a
18 methacrylate-based resin modified by a urethane, instead. For these reasons, the term "methacrylate
19 urethane resin" is construed as proposed by CND.

20 V. CONCLUSION

21 The disputed claim terms of the patent-in-suit are construed as set forth above.

22
23
24 IT IS SO ORDERED.

25
26 Dated: July 12, 2013

27 
RICHARD SEEBORG
UNITED STATES DISTRICT JUDGE

28 No. C-12-0747
ORDER

United States District Court
For the Northern District of California

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