

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JANE CHI-YA CHENG, TERRY EUGENE HELTON,
DOMINICK NICHOLAS MAZZONE and DENNIS E. WALSH

Appeal No. 2000-1007
Application 08/853,007

ON BRIEF

Before GARRIS, WARREN and WALTZ, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 1 through 10, which are all of the claims in the application. Claim 1 is illustrative of the claims on appeal:

1. A process for producing alkyl aromatic compounds which comprises contacting at least one aromatic compound with at least one alkylating agent or transalkylating agent possessing at least one aliphatic group having 1 to 5 carbon atoms under alkylation or transalkylation reaction conditions and in the presence of an alkylation or transalkylation catalyst, to provide an alkylated aromatic product possessing at least one alkyl group derived from said alkylating agent or transalkylating agent, said catalyst comprising a binder-free molecular sieve having an X-ray diffraction pattern that includes the lines set forth in Table A.

The appealed claims, as represented by claim 1, are drawn to a process for producing an alkylated aromatic compound which comprises at least alkylation or transalkylation with at least

way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification.”); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (“During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow. When the applicant states the meaning that the claim terms are intended to have, the claims are examined with that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969) (before the application is granted, there is no reason to read into the claim the limitations of the specification.)”

Thus, we interpret the claim term “binder-free” to permit the inclusion to some extent of “binder material such as clays or metal oxides, i.e., alumina or silica” which performs the function as a “binder” and does not form a part of the *crystalline* molecular sieve for another purpose. With respect to the extent that binder material can be included, we point out that the term “substantially free” is a term of degree for which the written description in the specification must either provide a definition or some standard of measurement for the claim term that it modifies, or that term will be given its broadest reasonable ordinary meaning of from free to largely but not wholly free. *See Morris, supra; York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572-73, 40 USPQ2d 1619, 1622-23 (Fed. Cir. 1996) (“In this case, the patent discloses no novel use of claim words. Ordinarily, therefore, ‘substantially’ means ‘considerable in . . . extent,’ *American Heritage Dictionary Second College Edition* 1213 (2d ed. 1982), or ‘largely but not wholly that which is specified,’ *Webster's Ninth New Collegiate Dictionary* 1176 (9th ed. 1983).”); *Seattle Box Co., Inc. v. Industrial Crating & Packing Inc.*, 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984) (“Definiteness problems arise when words of degree are used. That some claim language may not be precise, however, does not automatically render a claim invalid. When a word of degree is used . . . [it] must [be determined] whether the patent's specification provides some standard for measuring that degree.”); *In re Mattison*, 509 F.2d 563, 564-65, 184 USPQ 484, 486 (CCPA 1975); *cf. In re Marosi*, 710 F.2d 799, 802-03, 218 USPQ 289, 292 (Fed. Cir. 1983) (the generally guidelines in appellants' specification with respect to the term “essentially free of alkali metal” permitted a person of ordinary skill in the art to “draw the line between unavoidable impurities in starting materials and essential ingredients”). We point out in this respect, it is appellants' burden to

define the claimed invention encompassed by the appealed claims in the specification. *See Morris*, 127 F.3d at 1055-56, 44 USPQ2d at 1029.

We fail to find any guidelines in appellants' specification which would define the extent to which the molecular sieve can contain binder material and meet the "substantially free" limitation included in the term "binder-free" appealed claim 1. However, while this raises the issue of whether the appealed claims comply with the provisions of 35 U.S.C. § 112, second paragraph, we find that a reasonable, conditional interpretation of claim 1 that is adequate for purposes of resolving prior art issues in this appeal can be made without unsupported speculative assumptions, and thus, for purposes of this appeal, we conditionally interpret the cited phrase to mean that the molecular sieve can be completely free of or can contain small amounts of binder material. *Cf. In re Steele*, 305 F.2d 859, 862-63, 134 USPQ 292, 295 (CCPA 1962); *Ex parte Saceman*, 27 USPQ2d 1472, 1474 (Bd. Pat. App. & Int. 1993).¹

It is well settled that the examiner has the burden of making out a *prima facie* case of anticipation under § 102(b) in the first instance by pointing out where each and every element of the claimed invention, arranged as required by the claim, is described identically in a single reference, either expressly or under the principles of inherency, in a manner sufficient to have placed a person of ordinary skill in the art in possession thereof. *See generally, In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990).

The controlling issue involved with the grounds of rejection of appealed claims 1 through 10 under §§ 102(b) and 103 (a) is the extent to which this reference discloses the *claimed* "binder-free molecular sieve," whether further characterized in appealed claim 1 by "an X-ray diffraction pattern" or in appealed claim 10 as "MCM-22." We find that in either case, the claim term "binder-free" is defined in the written description in appellants' specification as describing "the synthetic porous crystalline material or molecular sieve as being *substantially free or free of*

¹ While we have so considered appealed claim 10, the matter of whether this claim and other claims which contain such language comply with § 112, second paragraph, should be addressed by the examiner upon any further consideration of the appealed claims subsequent to this appeal.

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binder material such as clays or metal oxides, i.e., alumina or silica” (page 11, lines 32-34; emphasis supplied).

The examiner’s decision is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

CHARLES F. WARREN)	
Administrative Patent Judge)	
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Administrative Patent Judge)	BOARD OF PATENT
)	APPEALS AND
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