

The opinion in support of the decision being entered today
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HORST MUEHLFELD,
THOMAS SCHAUBER,
and ERICH CHRISTOPH

Appeal 2007-3673
Application 10/365,189
Technology Center 1700

Decided: September 10, 2007

Before EDWARD C. KIMLIN, CHARLES F. WARREN, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 1-9. We have jurisdiction under 35 U.S.C. § 6.

Claim 1 is illustrative:

1. A thermoplastically processable polyurethane molding material comprising:

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a mixture of at least one first thermoplastic polyurethane defining a component A and at least one second thermoplastic polyurethane defining a component B,

the component A being at least 5 percent by weight of the mixture and being obtained by reacting at least one of a first aliphatic polyol having a molecular weight of 800 to 4000 g/mol and a hydroxyl number of 20 to 235 and being selected from the group consisting of polyadipates, polycaprolactones, polycarbonates, polytetrahydrofurans and corresponding copolymers or mixtures thereof with 1,6-hexamethylene diisocyanate and a first chain-extending agent 1,6-hexanediol in an equivalent ratio of the 1,6-hexamethylene diisocyanate to the polyol of 1.5 : 1 to 14.0 : 1, a first NCO index equal to a quotient of an equivalent ratio of isocyanate groups to the sum of the hydroxyl groups of the first aliphatic polyol and the first chainextending agent, multiplied by a 100, lying within a range of 96 to 105,

the component B being obtained by reacting at least one second aliphatic polyol having a molecular weight of 800 to 4000 g/mol and a hydroxyl number of 20 to 235 and being selected from the group consisting of polyadipates, polycaprolactones, polycarbonates, polytetrahydrofurans and corresponding copolymers or mixtures thereof with at least one diisocyanate selected from the group consisting of 1,4-butanediol, 1,5 pentanediol, 1,4-cyclohexanediol, bis(hydroxymethyl)cyclohexane, bis(hydroxyethyl)hydroquinone, polycaprolactone having a number average molecular weight of 350 to 600 g/mol and polytetrahydrofuran having a number average molecular weight of 200 to 600 g/mol in an equivalent ratio of the diisocyanate to the polyol of 1.5 : 1 to 14.0 : 1, a second NCO index equal to a quotient of an equivalent ratio of isocyanate groups to the sum of the hydroxyl groups, multiplied by 100, of the second aliphatic polyol and the second chain-extending agent lying within a range of 96 to 105.

The Examiner relies upon the following references:

| | | |
|---------------|-----------------|---------------|
| Kaufhold '638 | US 6,410,638 B1 | Jun. 25, 2002 |
| Kaufhold '389 | US 6,518,389 B1 | Feb. 11, 2003 |
| Muhlfeld | US 6,586,553 B1 | Jul. 1, 2003 |

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Appellants' claimed invention is directed to a thermoplastically processable polyurethane molding material comprising a mixture of at least one first thermoplastic polyurethane defining a component A and at least one second thermoplastic polyurethane defining a component B.

Appealed claims 1-9 stand rejected as unpatentable under 35 U.S.C. § 103(a) as follows:

- (i) claims 1-3, 6, 7, and 9 over Muehlfeld¹
- (ii) claims 1 and 3-9 over Kaufhold '638; and
- (iii) claims 1, 3, and 6-9 over Kaufhold '389.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in full agreement with the Examiner that the claimed subject matter is unpatentable over the cited prior art. Accordingly, we will sustain the Examiner's rejections for the reasons set forth in the present record, and we add the following for emphasis only.

The Examiner properly found that Muehlfeld, Kaufhold '638, and Kaufhold '389 each exemplify thermoplastic polyurethane that corresponds to component A and component B for use in molding compositions. Muehlfeld, Kaufhold '638, and Kaufhold '389 each fails to expressly teach a mixture of the described thermoplastic polyurethanes that correspond to

¹ The Examiner has recognized that Appellants have inadvertently excluded claimed 2 from this stated rejection (Answer 2 and 3). Appellants have not disputed the Examiner's position in a responsive Brief. We will treat the subject matter of claim 2 as standing or falling with independent claim 1 because Appellants have not argued the patentability of the remaining dependent claims separately from the independent claims.

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component A and component B. However, the Examiner reasoned that it would have been obvious to one of ordinary skill in the art at the time of the invention to mix in an extruder or kneader two thermoplastic polyurethanes as exemplified in Muehlfeld, Kaufhold ‘638, and Kaufhold ‘389 to form a single molding composition. The Examiner concluded that it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, citing *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (Answer 3-8).

Appellants have not disputed the Examiner’s factual determination that Muehlfeld, Kaufhold ‘638, and Kaufhold ‘389 each exemplify thermoplastic polyurethanes that correspond to component A and component B for use in molding compositions. For each of the stated rejections, Appellants contend that the cited reference does not have a teaching or disclosure to mix the exemplified thermoplastic polyurethanes. Appellants contend that the examples in the Specification provide “surprising results” that overcome any possible *prima facie* case of obviousness (Br. 8, 10, and 11).

Although Muehlfeld, Kaufhold ‘638, and Kaufhold ‘389 do not exemplify mixtures of thermoplastic polyurethane that correspond to component A and component B, we are in complete agreement with the Examiner’s determination that the references provide the requisite motivation, suggestion, and teaching to use more than one thermoplastic polyurethane because each is taught to be useful for the same or similar

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purpose, thus suggesting that the mixture would also be useful for the very same purpose. *In re Kerkhoven*, supra; *In re Susi*, 440 F.2d 442, 445, 169 USPQ 423, 426 (CCPA 1971).

We now turn to the evidence presented in the Specification. The examples in the Specification do not support Appellants' argued position. The data relied upon by Appellants is not commensurate in scope with the claimed invention. See *In re Marosi*, 710 F.2d 799, 803, 218 USPQ 289, 292-93 (Fed. Cir. 1983) (holding that Marosi has not adduced evidence commensurate in scope with their claims); *see also In re Greenfield*, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978) (“Establishing that one (or a *small* number of) species gives unexpected results is inadequate proof, for ‘it is the view of this court that objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support.’” (*quoting In re Tiffin*, 448 F.2d 791, 792, 171 USPQ 294, 294 (CCPA 1971)). Appellants tested only a few compositions, as exhibited in the examples. However, the claims on appeal are much broader.

In so far as Appellants rely upon the data as a showing of secondary indicia of non-obviousness, Appellants have failed to point to evidence indicating the results in the data presented in the Specification were considered to be unexpected to one of ordinary skill in the art. “It is well settled that unexpected results must be established by factual evidence. Mere argument or conclusory statements in the specification does not suffice.” *In re Soni*, 54 F.3d 746, 750, 34 USPQ2d 1684, 1687 (Fed. Cir. 1995) (*quoting In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196

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(Fed.Cir.1984)). The question here, we emphasize, is a question of evidence and the burden is on the Appellants to show unexpected results. *In re Johnson*, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984). In our view, Appellants have not shouldered their burden.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

sld/ls

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