

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RUBING CAI

Appeal No. 2004-1062
Application No. 08/448,019

ON BRIEF

Before KIMLIN, KRATZ and PAWLIKOWSKI, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-4, 7-11 and 14. Claim 5 has been allowed by the examiner.

A copy of illustrative claim 1 is appended to this decision.

The examiner relies upon the following references as evidence of obviousness:

Druetzler	4,619,955	Oct. 28, 1986
Aoki et al. (Aoki)	5,087,661	Feb. 11, 1992
Zwiener et al. (Zwiener)	5,126,170	Jun. 30, 1992

Appeal No. 2004-1062
Application No. 08/448,019

Appellant's claimed invention is directed to a coating composition comprising an imine of the recited formula, a polyisocyanate, a polyaspartic ester, and an isocyanate functional urethane. The composition is substantially free of hydroxyl groups. According to appellant, the coating composition of the present invention has an extended pot life, excellent cure, and "provides coatings having impact resistance" (page 3 of principal brief, first sentence).

Appealed claims 1-4, 7-11 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Aoki and Zwiener in view of Druetzler.

Appellant submits at page 3 of the principal brief that "all of the rejected claims should stand or fall together."

We have thoroughly reviewed each of appellant's arguments for patentability. However, we are in complete agreement with the examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejections for the reasons set forth in the answer, which we incorporate herein, and we add the following primarily for emphasis.

Appeal No. 2004-1062
Application No. 08/448,019

Appellant does not dispute the examiner's factual determination that Aoki discloses curable polyurethane compositions comprising an imine which falls within the claimed formula, a polyisocyanate, and a polyurethane prepolymer having two or more isocyanate groups. The composition of Aoki does not comprise the claimed polyaspartic ester. However, as explained by the examiner, Zwiener teaches the use of such polyaspartic esters in polyurethane coatings similar to those of Aoki. Appellant does not dispute the examiner's finding that the suitable polyisocyanates of Zwiener that "are disclosed in column 2, lines 34-51 are essentially identical to those disclosed in Aoki et al." (page 5 of answer, third paragraph). Appellant also does not contest the examiner's finding that "[t]he polyaspartic esters [of Zwiener] are also within the range of the instantly claimed polyaspartic esters" (id.) Consequently, as a result of the collective teachings of Aoki and Zwiener, we concur with the examiner that it would have been obvious for one of ordinary skill in the art to formulate a polyurethane coating containing polyisocyanates, polyurethane prepolymers and a combination of curatives comprising the imines of Aoki and the polyaspartic

Appeal No. 2004-1062
Application No. 08/448,019

esters of Zwiener. As properly noted by the examiner, it is a matter of obviousness for one of ordinary skill in the art to combine the components taught by the prior art to be useful for the same purpose. In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

The examiner also appreciates that neither Aoki nor Zwiener teaches the specific claimed isocyanate functional urethane. However, appellant does not take issue with the examiner's legal conclusion that it would have been obvious for one of ordinary skill in the art to employ the specific isocyanate functional urethane of Druetzler in the coatings of Aoki and Zwiener for the purpose of obtaining flexible coatings (see page 7 of answer).

Appellant contends that "the Examiner has ignored the fact that Aoki discloses a moisture curable coating composition in which there is an excess of free isocyanate groups to react with atmospheric moisture after the coating composition is applied to the object to be coated" (page 5 of principal brief, first paragraph). However, we, like the examiner, do not understand the relevancy of this argument inasmuch as appellant has failed to explain how Aoki's teaching of a moisture curable compo-

Appeal No. 2004-1062
Application No. 08/448,019

sition militates against the obviousness of coating compositions within the scope of claim 1 on appeal. We observe that appealed claim 1 does not define the composition as not moisture curable.

Appellant also presents the argument that "the imine disclosed by Aoki is limited to aldimines formed from aromatic aldehydes" (id.). However, R_1 and R_2 of the claimed formula can be an aryl group and appellant has not disputed the examiner's finding that the imines disclosed by Aoki are within the scope of the appealed claims. Hence, appellant's contention that "Aoki teaches away from the use of aldimines other than those formed from aromatic aldehydes, and in particular, from those formed from aliphatic aldehydes" (id.) is not germane to the claimed subject matter on appeal.

Appellant also maintains that "Zwiener's disclosure is limited to the use of polyaspartic esters with polyhydroxyl compounds as the optional isocyanate-reactive component", whereas the claimed composition is "substantially free of hydroxyl groups" (page 5 of principal brief, second paragraph). However, as acknowledged by appellant, Zwiener's use of polyhydroxyl compounds is optional. Consequently, Zwiener fairly teaches compositions that are substantially free of hydroxyl groups.

Appeal No. 2004-1062
Application No. 08/448,019

As a final point, we note that appellant bases no arguments upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the inference of obviousness established by the examiner.

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 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
PETER F. KRATZ)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
)	
)	
)	
BEVERLY A. PAWLIKOWSKI)	
Administrative Patent Judge)	

EAK/vsh

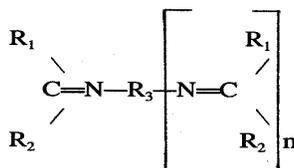
Appeal No. 2004-1062
Application No. 08/448,019

HEIDI A. BOEHLEFELD
THE SHERWIN WILLIAMS COMPANY
101 PROSPECT AVENUE NW
1100 MIDLAND BLDG. LEGAL DEPARTMENT
CLEVELAND, OH 44115-1075

APPENDIX
Claim 1

1. A coating composition comprising:

(i) 1-40 percent by weight of an imine having the structure



wherein n is 0 to 30,

R₁ and R₂ are selected from the group consisting of hydrogen, alkyl, aryl, cycloaliphatic, and substituted alkyl, aryl, and cycloaliphatic groups; and R₁ and R₂ may be the same or different; and

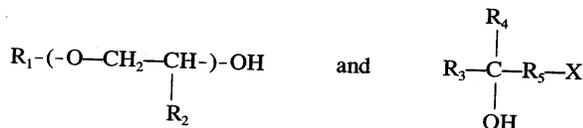
R₃ is selected from the group consisting of aliphatic, aromatic, arylaliphatic, and cycloaliphatic groups and which may also contain O, N, S, or Si;

- (ii) 15-55 percent by weight of a polyisocyanate having an average of at least two isocyanate groups per molecule;
- (iii) 1-50 percent by weight of at least one polyaspartic ester;

(iv) 1-20 percent by weight of an isocyanate functional urethane comprising the reaction product of:

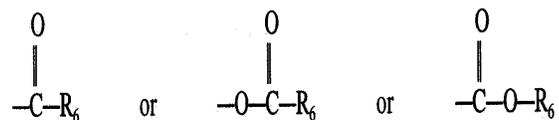
(a) an aliphatic polyisocyanate having an average of at least 2.1 isocyanate groups per molecule and selected from the group consisting of biurets and isocyanurates of linear aliphatic diisocyanates; and

(b) at least one monofunctional alcohol having a molecular weight less than about 500 and which is selected from the group consisting of:



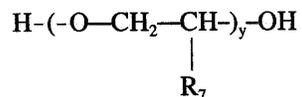
wherein n is from 1 to about 10; R₁ is an aliphatic radical of 1 to about 12 carbons; R₂ is H or CH₃; R₃ and R₄ are independently aliphatic of 1 to about 12 carbons or H; R₅ is an aliphatic radical of 1 to about 8 carbons or nothing; X is

Appeal No. 2004-1062
Application No. 08/448,019



and R_6 is an aliphatic radical of 1 to about 12 carbons, and

(c) at least one diol having the formula:



wherein R_7 is H or CH_3 and y is from 1 to about 40; wherein the total NCO/OH equivalents ratio is greater than 1.0 and the ratio of OH equivalents from (b) to OH equivalents from (c) ranges from 0.3:1 to 2.0:1; and

wherein (ii) is different from (iv) and the coating composition is substantially free of hydroxyl groups.