

**THIS OPINION WAS NOT WRITTEN FOR PUBLICATION**

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 11

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JOACHIM PROBST, WERNER KUBITZA,  
ROLF ROSCHU and HANS J. LAAS

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Appeal No. 1996-3560  
Application No. 08/432,560<sup>1</sup>

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ON BRIEF

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Before JOHN D. SMITH, GARRIS and LIEBERMAN, Administrative Patent Judges.

LIEBERMAN, Administrative Patent Judge.

**DECISION ON APPEAL**

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<sup>1</sup> Application for patent filed May 1, 1995. According to appellants, this application is a continuation of Application No. 08/225,032 filed April 8, 1994, now abandoned.

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This is an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 5 through 13 which are all of the claims remaining in the application.

#### **THE INVENTION**

Appellants' invention is directed to a water containing coating composition having a specific emulsifier which is an ammonium salt of a mono sulfuric acid ester of adducts prepared by ethoxylation of long chain alcohols or substituted phenols. There are two components present in the composition in addition to the emulsifier. The first component is a polyol which is a polymer of an emulsion polymerized ethylenically unsaturated monomer having at least two hydroxy groups per molecule and being dispersed in water. Said hydroxy containing polymer is emulsion polymerized in the presence of the above named emulsifier.

The second component is an aliphatic or cycloaliphatic polyisocyanate emulsified in the dispersion of the hydroxy containing polymer.

#### **THE CLAIM**

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Claims 5 is illustrative of appellants' invention and is reproduced below.

5. A water-borne coating composition containing an emulsifier comprising a member selected from the group consisting of ammonium salts of monosulfuric acid esters of adducts prepared by the ethoxylation of long chain alcohols or substituted phenols with ethylene oxide at a molar ratio of 1:2 to 1:100 and a binder which comprises a mixture of

(a) a polyol component which is dispersed in water or a water/solvent mixture and comprises at least one polymer prepared by the emulsion polymerization of olefinically unsaturated monomers in the presence of 0.1 to 10% by weight, based on the total amount of monomers, of said emulsifier and having a molecular weight ( $M_n$ ) of 500 to 100,000, at least two alcoholic hydroxyl groups per molecule, a hydroxyl value of 15 to 250 mg KOH/g, an acid value of 0 to 7 mg KOH/g, and a total content of sulfonate and carboxylate groups of 0 to 4.5 milliequivalents per 100 g of solid resin and

(b) a polyisocyanate component which is emulsified in the dispersion of polyol component (a), has a viscosity at 23°C of 50 to 10,000 mPaCs and an average NCO functionality of 1.8 to 4.2, and contains 12.0 to 21.5% by weight of (cyclo)aliphatically bound isocyanate groups and, optionally, 2 to 20% by weight of ethylene oxide units present within polyether chains, the polyether chains containing an average of 5 to 70 ethylene oxide units,

wherein the components are present in quantities corresponding to an equivalent ratio of isocyanate groups of component (b) to alcoholic hydroxyl groups of component (a) of 0.2:1 to 5:1.

#### THE REFERENCES

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The references of record relied upon by the examiner as evidence of obviousness are:

Hombach et al. (Hombach) 5, 1987	4,663,377	May
Weissgerber et al. (Weissgerber) 1991	4,997,879	Mar. 5,
Kubitza et al. (Kubitza) 24, 1991	5,075,370	Dec.

Odian, Principles of Polymerization, Second Edition, John Wiley & Sons, Inc., New York (1981) pp. 319-320.

#### THE REJECTION

Claims 5 through 13 stand rejected under 35 U.S.C. § 103 as unpatentable over Hombach in view of Weissgerber, Odian and Kubitza.

#### OPINION

As an initial matter, appellants submit that claims 5 through 13 are grouped together for purposes of this appeal.<sup>2</sup> Accordingly, we select claim 5, the sole independent composition claim as representative of appellants' invention

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<sup>2</sup> Brief, page 3.

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and limit our consideration to said claim. 37 CFR §  
1.192(c)(7) 1995.

We have carefully considered appellants' arguments for patentability. However, we are in complete agreement with the examiner that the claimed subject matter is unpatentable in view of the applied prior art. We will sustain the examiner's rejection relying primarily on the references to Hombach and Weissgerber.

Appellants state that their emulsifiers are "chemically distinguishable" from those of the Hombach reference and are used in a different manner.<sup>3</sup> We disagree. Our interpretation of the disclosure of Hombach differs from appellants. The reference to Hombach and the claimed subject matter use the term "emulsifier" in a different manner. The various interpretations of the term, "emulsifier," by Hombach and appellants respectively, results in confusion in applying the Hombach reference to the claimed subject matter.

We find that the emulsifier of the claimed subject matter is used in the polymerization of the hydroxy containing

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<sup>3</sup> Brief, page 4.

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polymer component. See Hombach, column 5, lines 19-53 and appellants' Brief, page 5, lines 27-30 wherein appellants acknowledge that hydroxy containing polymers of Hombach are prepared by emulsion polymerization.

A second and different "emulsifier" as used by Hombach constitutes an isocyanate component containing (cyclo)aliphatic isocyanate which may be partially reacted with polyether resulting in a mixture of isocyanate and isocyanate terminated polyether. This "emulsifier" is mixed with and modifies preformed hydroxy containing polymer. However, it is not used in the emulsion polymerization thereof. See column 5, lines 19-53.

Neither the principal Brief nor the Reply Brief argue that the polyisocyanate "emulsifier" component of Hombach differs from that of the claimed subject matter. Rather, appellants' argument in their Reply Brief is directed to the proposition that the polyisocyanate dispersions Hombach are the only emulsifiers specifically disclosed in that reference.<sup>4</sup> Nonetheless, as noted above and admitted by appellants, we

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<sup>4</sup> Reply Brief, page 2.

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find that another unnamed emulsifier resulting from the emulsion polymerization of the polyol is present in the composition of Hombach.

The examiner relies upon Weissgerber for its disclosure of the claimed emulsifier used in the polymerization of olefinically unsaturated monomers containing hydroxy groups. We find that Weissgerber discloses the emulsion polymerization of ethylenically unsaturated polyols using appellants' preferred emulsifier. See Comparative Example A and Examples 1 and 2. We find that the addition of 18 grams of concentrated ammonium hydroxide to sodium nonylphenyl polyglycoether sulfate as disclosed in the above examples results in the formation of the emulsifier of the claimed subject matter. We conclude that it would have been obvious to the person having ordinary skill in the art to prepare Hombach's polyol using the emulsifier of Weissgerber for its ordinary intended purpose.

As for appellants' argument that both Hombach and Weissgerber are directed to adhesive compositions as opposed to appellants' coating composition, we find that both references disclose the utilization of their respective

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composition by coating the compositions on a substrate. See Hombach, column 8, line 54 and Weissgerber, column 4, lines 46-47. This coating step meets the requirement of the claimed subject matter for a "coating composition."

#### **DECISION**

The rejection of claims 5 through 13 under 35 U.S.C. § 103 as unpatentable over Hombach in view of Weissgerber, Odian and Kubitza is affirmed.

The decision of the examiner is affirmed.

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

**AFFIRMED**

JOHN D. SMITH	)	
Administrative Patent Judge	)	
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	)	
	)	
	)	BOARD OF PATENT
BRADLEY R. GARRIS	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
PAUL LIEBERMAN	)	
Administrative Patent Judge	)	

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