

**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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte CHAK-KAI YIP, JAMES W. GORDON and NABIL SABA

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Appeal No. 1996-1566  
Application No. 08/095,369<sup>1</sup>

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HEARD: October 18, 1999

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Before GARRIS, PAK and LIEBERMAN, Administrative Patent Judges.

LIEBERMAN, Administrative Patent Judge.

**DECISION ON APPEAL**

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<sup>1</sup> Application for patent filed July 20, 1993. According to appellants, this application is a continuation of Application No. 07/823,409 filed January 21, 1992, now abandoned.

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This is an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 2 and 4 through 24 which are all the claims in the application.

#### **THE INVENTION**

The invention is directed to a four component composition for use as a curing agent and adhesion promotion in a hydroxy terminated diorganosiloxane coating. The composition contains a first component which is an epoxy resin selected from a bisphenol epichlorohydrin reaction product, an epoxyated novolac and a cycloaliphatic epoxide. The second, third and fourth components respectively are an amine functional silane of a specific formula, a catalytic amount of an organic metallic compound and a solvent.

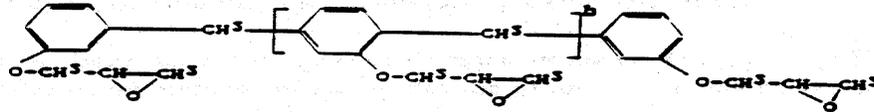
#### **THE CLAIM**

Claim 23 is illustrative of appellants' invention and is reproduced below:

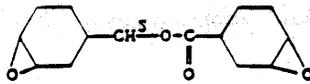
23. A composition consisting essentially of
- (A) an epoxy resin selected from the group consisting of

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(I) a product of the reaction of epichlorohydrin and bisphenol which product has the formula,



wherein n is a range of 0 to

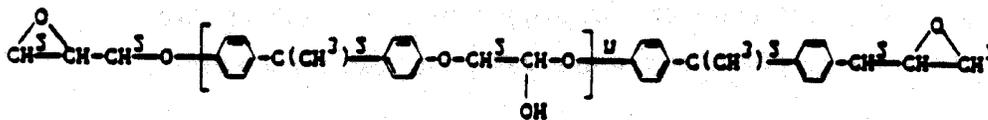


number in the 15;

(ii) a novalac resin which resin has the formula,

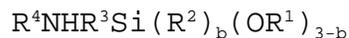
wherein p is a number in the range of 1 to 2; and

(iii) a cycloaliphatic compound which compound has the formula,

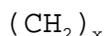


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(B) an amine functional silane of the formula,



wherein  $R^1$  and  $R^2$  are monovalent hydrocarbon groups of 1 to 4 carbons and  $b$  has a value of 0 or 1;  $R^3$  is a divalent hydrocarbon group of the formula,



wherein  $x$  is an integer of from 3 to 10; and  $R^4$  is selected from the group consisting of hydrogen, a monovalent hydrocarbon group of one to four carbons and a group of the formula,



wherein  $R^3$  is as defined above and  $R^5$  is hydrogen or a monovalent hydrocarbon group of 1 to 4 carbons

wherein the ratio of the number of amino groups in the amine functional silane to the number of epoxy groups in the epoxy resin is in the range of 1:1 to 5:1;

(C) a catalytic amount of an organometallic compound;  
and

(D) an organic solvent

which composition, when added to an OH-terminated polydiorganosiloxane, then applied to an EPDM-base rubber surface and cured thereon, forms an abrasion resistant film adherent to the surface and having good freeze-release properties.

#### THE REFERENCES OF RECORD

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As evidence of obviousness, the examiner relies upon the following references:

Murphy 1967	3,341,486	Sep. 12,
Endo 11, 1980	4,233,428	Nov.
Sumida 1981	4,252,933	Feb. 24,

#### THE REJECTION

Claims 2 and 4 through 24 stand rejected under 35 U.S.C. § 103, as being unpatentable over Endo in view of Sumida taken further with Murphy.

#### OPINION

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with appellants that the aforementioned rejections are not well founded. Accordingly, we will not sustain the rejections.

"[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a prima facie case of unpatentability." See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

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The examiner relies upon a combination of three references to disclose the claimed subject matter. It is the examiner's position that one skilled in the art would have found it obvious to add an organometallic catalyst taught in Sumida to the composition of Endo as an adhesion promoter for a hydroxy terminated polydiorganosiloxane. See Answer, page 5. We disagree.

Endo discloses a primer composition on a substrate material. See column 1, lines 6 - 8. The primer includes an epoxy resin, an amino group containing silane, an additional organic silicon containing compound, a silane containing a mercapto group and an organic solvent. See Endo, column 1, line 55 through column 2, 12. The composition is spread as a primer on base materials such as glass, aluminum, mortar and polyester. Thereafter an aminoxy-type silicone sealant is applied to the primer. See Example 1.

We find that Endo discloses each of the components (A), (B) and (D) required by the claimed subject matter. There is no disclosure of component (C), an organometallic compound.

Sumida likewise discloses a primer composition spread on a substrate as a primer for silicon rubber or an elastomeric

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silicon composition. See column 5, lines 44-49 and column 6, lines 4-7. The Sumida composition contains a hydroxy end blocked polydiorganosiloxane, a polyorganohydrogen siloxane having at least three hydrogen atoms attached to the silicon atom, and an organometallic catalyst as requisite components of his invention. See column 4, line 57 through column 5, line 13. These three components of Sumida interact in a specific manner. The organometallic compound accelerates the dehydrogenizing condensation reaction between the hydroxyl radical on the hydroxy end blocked polyorganosiloxane and the Si-H bond of the polyorganohydrogen siloxane. See column 4, lines 56-61. We find no disclosure or suggestion in Sumida that the organometallic compound in and of itself acts as a condensation catalyst for hydroxyl end blocked polyorganosiloxane in the absence of polyorganohydrogen siloxane. Accordingly, we conclude that there is no rationale or motivation to add the organometallic compound of Sumida to the composition taught by Endo as suggested by the examiner.

As for Murphy, we find that patentee is directed to vulcanized organopolysiloxane molding compositions and methods for their preparation. The resulting elastomeric polymers are

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free standing cured films and molded articles. See Examples 1-6 and column 8, lines 4-7. We conclude that there is no suggestion for utilization of the compositions of Murphy or any component taught therein for either coating or priming.

Based upon the above considerations, we further conclude that there is no reason why one of ordinary skill in the art would have been motivated to select the organometallic compound disclosed by either Sumida or Murphy as a catalyst for the primer composition taught by Endo.

In view of the above analysis, we have determined that the examiner's legal conclusion of obviousness is not supported by the facts. "Where the legal conclusion [of obviousness] is not supported by the facts it cannot stand." In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967).

Since no prima facie case of obviousness has been established, we need not address the experimental results relied upon by appellants. See Brief, page 8. See In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

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**Decision**

The rejection of claims 2 and 4 through 24 under 35  
U.S.C.  
§ 103, as being unpatentable over Endo in view of Sumida taken  
further with Murphy is reversed.

The decision of the examiner is reversed.

**REVERSED**

BRADLEY R. GARRIS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
CHUNG K. PAK	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
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PAUL LIEBERMAN	)	
Administrative Patent Judge	)	

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